SAMSUNG

LFD DISPLAY
User Manual

ED65D ED75D

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

Table of contents

Before Using the Product

Copyright **5**

Safety Precautions **6**
Symbols 6
Cleaning 6
Storage **7**
Electricity and Safety 7
Installation 8
Operation 10

Preparations

Checking the Components **13**
Components 13

Parts **15**
Panel Key 15
Reverse Side 16
External sensor KIT 17
Assembling the Holder-Wire stand 19
Anti-theft Lock 19
Remote Control 20

Before Installing the Product (Installation Guide) **22**
Tilting Angle and Rotation 22
Ventilation 22

Dimensions **23**

Installing the Wall Mount **24**
Installing the Wall Mount Kit 24
Wall Mount Kit Specifications (VESA) 25

Remote Control (RS232C) **26**
Cable Connection 26
Connection 27
Control Codes 28

Connecting and Using a Source Device

Before Connecting **37**
Pre-connection Checkpoints 37

Connecting to a PC **37**
Connection using the D-SUB cable (Analog type) 37
Connection using a DVI cable (Digital type) 38
Connection Using an HDMI-DVI Cable 38
Connection Using an HDMI Cable 39

Connecting to a Video Device **40**
Connection Using an AV Cable 40
Connection Using the component Cable 40
Connection Using an HDMI-DVI Cable 41
Connection Using an HDMI Cable 41

Connecting to an Audio System **42**

Changing the Input source **42**
Source 42

Using MDC

Configuring Settings for Multi Control **43**
Configuring settings for Multi Control 43

MDC Program Installation/Uninstallation **44**
Installation 44
Uninstallation 44

Connecting to MDC **45**
Using MDC via RS-232C (serial data communications standards) 45

Screen Adjustment

Picture Mode **46**
If the input source is PC, DVI, HDMI(PC) 46
If the input source is AV, Component, HDMI(AV) 46

Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R) **47**

Picture Size **48**
Picture Size 48
Position 50
Zoom/Position 50
Resolution Select 51

Auto Adjustment **51**

PC Screen Adjustment **52**

PIP **53**

Advanced Settings **54**

Table of contents

Dynamic Contrast 54
Black Tone 54
Flesh Tone 54
RGB Only Mode 54
Color Space 55
White Balance 55
Gamma 55
Motion Lighting 55

Picture Options 56
Color Tone 57
Color Temp. 57
Digital Clean View 57
MPEG Noise Filter 57
HDMI Black Level 58
Film Mode 58
Dynamic Backlight 58

Picture Off 59

Reset Picture 59

Sound Adjustment

Sound Mode 60

Sound Effect 61

Speaker Settings 62

Reset Sound 62

Applications

Source List 63
Refresh 63
Edit Name 63
Information 63

System

Menu Language 64

Multi Control 65
Configuring settings for Multi Control 65

Time 66
Clock Set 66
Sleep Timer 66
On Timer 67
Off Timer 68
Holiday Management 68

Eco Solution 69
Energy Saving 69
Eco Sensor 69
Auto Power Off 69

Screen Burn Protection 70
Pixel Shift 70
Timer 71
Immediate Display 72
Side Gray 72

Ticker 73

Video Wall 74
Video Wall 74
Format 74
Horizontal 74
Vertical 75
Screen Position 75

Source AutoSwitch Settings 76
Source AutoSwitch 76
Primary Source Recovery 76
Primary Source 76
Secondary Source 76

Change PIN 77

General 78
Max. Power Saving 78
Game Mode 78
Auto Power 78
Safety Lock 78
Button Lock 79
Standby Control 79
Lamp Schedule 79
OSD Display 80
Power On Adjustment 80
Temperature Control 80

Anynet+ (HDMI-CEC) 81
Anynet+ (HDMI-CEC) 81
Auto Turn Off 82
Troubleshooting for Anynet+ 83

Magic Clone 85

Reset System 85

Table of contents

Reset All 86

Support

Software Update 87
By USB 87

Contact Samsung 87

Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Center 88
Testing the Product 88
Checking the Resolution and Frequency 88
Check the followings. 89

Q & A 96

Specifications

General 98

PowerSaver 100

Preset Timing Modes 101

Appendix

Contact SAMSUNG WORLD WIDE 103

Responsibility for the Pay Service (Cost to Customers) 112
Not a product defect 112
A Product damage caused by customer's fault 112
Others 112

Optimum Picture Quality and Afterimage Burn-in Prevention 113
Optimum Picture Quality 113
Prevention of Afterimage Burn-in 113

License 115

Terminology 116

Chapter 01
Before Using the Product

Copyright

The contents of this manual are subject to change without notice to improve quality.

© 2014 Samsung Electronics

Samsung Electronics owns the copyright for this manual.

Use or reproduction of this manual in parts or entirety without the authorization of Samsung Electronics is prohibited.

Microsoft, Windows are registered trademarks of Microsoft Corporation.

VESA, DPM and DDC are registered trademarks of the Video Electronics Standards Association.

Ownership of all other trademarks is attributed to their due owner.

Safety Precautions

Caution

RISK OF ELECTRIC SHOCK DO NOT OPEN

Caution : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. (OR BACK)

THERE ARE NO USER SERVICEABLE PARTS INSIDE.

REFER ALL SERVICING TO QUALIFIED PERSONNEL.

This symbol indicates that high voltage is present inside.

It is dangerous to make any kind of contact with any internal part of this product.

This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Symbols

Warning

A serious or fatal injury may result if instructions are not followed.

Caution

Personal injury or damage to properties may result if instructions are not followed.

Activities marked by this symbol are prohibited.

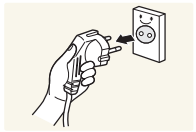
Instructions marked by this symbol must be followed.

Cleaning

— Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.

— Take the following steps when cleaning.

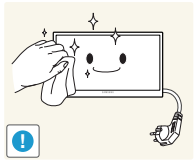
— The following images are for reference only. Real-life situations may differ from what is shown in the images.



1 Power off the product and computer.

2 Disconnect the power cord from the product.

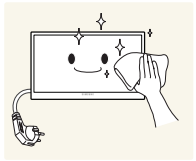
— Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.



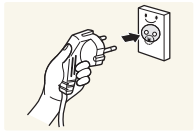
3 Wipe the product with a clean, soft and dry cloth.

- Do not use detergents that contain alcohol, solvent or surface-active agents.

- Do not spray water or detergent directly on the product.



4 Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the product.



5 Connect the power cord to the product when cleaning is finished.

6 Power on the product and computer.

Storage

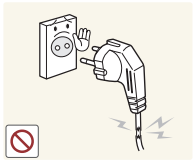
High-glossy models can develop white stains on the surface if an ultrasonic wave humidifier is used nearby.

— Contact Customer Service Center if the inside of the product needs cleaning (service fee will be charged).

Electricity and Safety

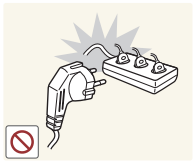
— The following images are for reference only. Real-life situations may differ from what is shown in the images.

Warning



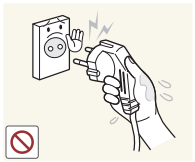
Do not use a damaged power cord or plug, or a loose power socket.

- An electric shock or fire may result.

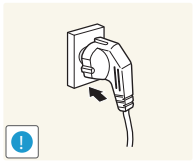


Do not use multiple products with a single power socket.

- Overheated power sockets may cause a fire.

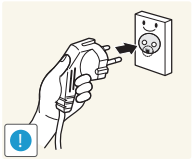


Do not touch the power plug with wet hands. Otherwise, an electric shock may result.



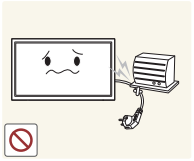
Insert the power plug all the way in so it is not loose.

- An unsecure connection may cause a fire.



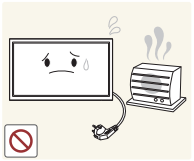
Connect the power plug to a grounded power socket (type 1 insulated devices only).

- An electric shock or injury may result.



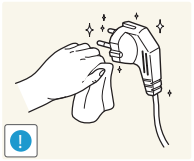
Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.

- Damage to the cord may result in a fire or electric shock.



Do not place the power cord or product near heat sources.

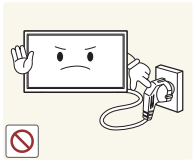
- A fire or electric shock may result.



Clean any dust around the pins of the power plug or the power socket with a dry cloth.

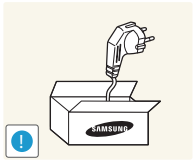
- A fire may result.

Caution



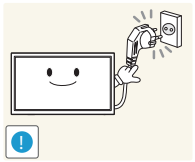
Do not disconnect the power cord while the product is being used.

- The product may become damaged by an electric shock.



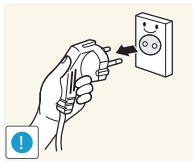
Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.

- A fire or electric shock may result.



Keep the power socket where the power cord is connected unobstructed.

- The power cord must be disconnected to cut off power to the product when an issue occurs.
- Note that the product is not completely powered down by using only the power button on the remote.



Hold the plug when disconnecting the power cord from the power socket.

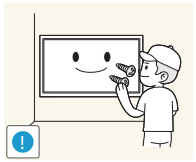
- An electric shock or fire may result.

Installation

Warning

DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.

- A fire may result.

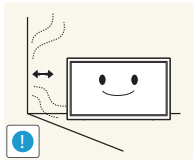


Have a technician install the wall-mount hanger.

- Installation by an unqualified person can result in an injury.
- Only use approved cabinets.

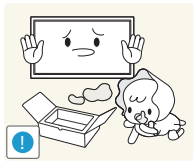
Do not install the product in poorly ventilated spaces such as a bookcase or closet.

- An increased internal temperature may cause a fire.



Install the product at least 10cm away from the wall to allow ventilation.

- An increased internal temperature may cause a fire.

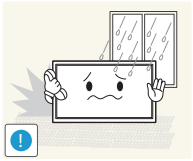


Keep the plastic packaging out of the reach of children.

- Children may suffocate.

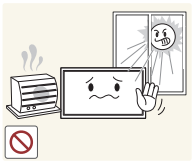
Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

- The product may fall and become damaged and/or cause an injury.
- Using the product in an area with excess vibration may damage the product or cause a fire.



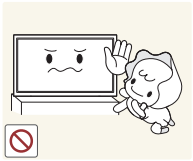
Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- A fire or electric shock may result.



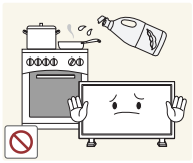
Do not expose the product to direct sunlight, heat, or a hot object such as a stove.

- The product lifespan may be reduced or a fire may result.



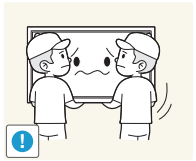
Do not install the product within the reach of young children.

- The product may fall and injure children.
- As the front is heavy, install the product on a flat and stable surface.



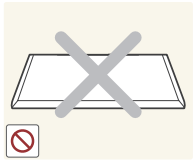
Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution



Do not drop the product while moving.

- Product failure or personal injury may result.

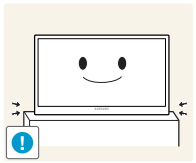


Do not set down the product on its front.

- The screen may become damaged.

When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.

- The product may fall and become damaged and/or cause an injury.
- Install the product only on cabinets or shelves of the right size.



Set down the product gently.

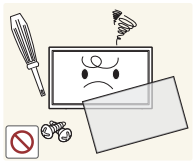
- Product failure or personal injury may result.

Installing the product in an unusual place (a place exposed to a lot of fine dust, chemical substances, extreme temperatures or a significant presence of moisture, or a place where the product will operate continuously for an extended period of time) may seriously affect its performance.

- Be sure to consult Samsung Customer Service Center if you want to install the product at such a place.

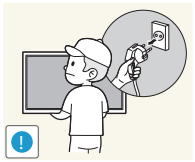
Operation

Warning



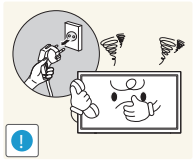
There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- A fire or electric shock may result.
- Contact Samsung Customer Service Center for repairs.



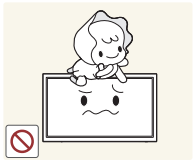
Before moving the product, turn off the power switch and disconnect the power cable and all other connected cables.

- Damage to the cord may result in a fire or electric shock.



If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Center.

- An electric shock or fire may result.

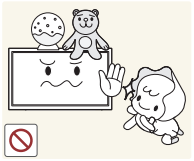


Do not let children hang from the product or climb on top of it.

- Children may become injured or seriously harmed.

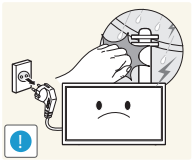
If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Center.

- Continued use can result in a fire or electric shock.



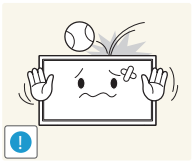
Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

- The product or heavy objects may fall as children try to reach for the toys or sweets resulting in a serious injury.



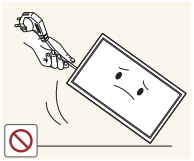
During a lightning or thunderstorm, power off the product and remove the power cable.

- A fire or electric shock may result.



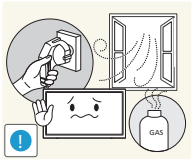
Do not drop objects on the product or apply impact.

- A fire or electric shock may result.



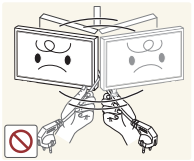
Do not move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.



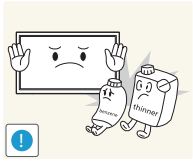
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



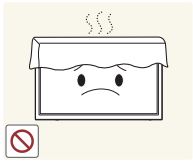
Do not lift or move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.



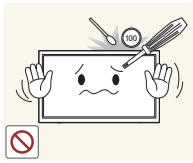
Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.



Ensure the vents are not blocked by tablecloths or curtains.

- An increased internal temperature may cause a fire.



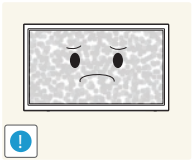
Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).

- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.

Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

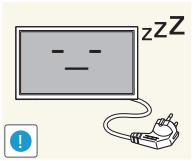
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.

Caution



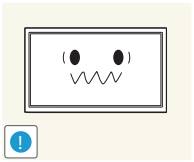
Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

- Activate power-saving mode or a moving-picture screen saver if you will not be using the product for an extended period of time.



Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).

- Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.

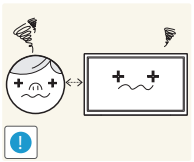


Use the product at the recommended resolution and frequency.

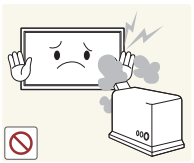
- Your eyesight may deteriorate.

Do not hold the product upside-down or move it by holding the stand.

- The product may fall and become damaged or cause an injury.

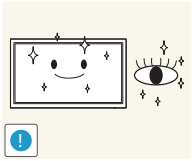


Looking at the screen too close for an extended period of time can deteriorate your eyesight.



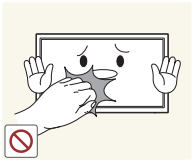
Do not use humidifiers or stoves around the product.

- A fire or electric shock may result.

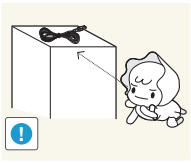


Rest your eyes for more than 5 minutes for every 1 hour of product use.

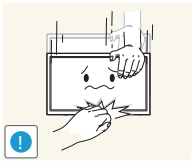
- Eye fatigue will be relieved.



Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.



Store small accessories out of the reach of children.



Exercise caution when adjusting the product angle or stand height.

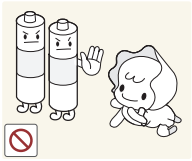
- Your hand or finger may get stuck and injured.
- Tilting the product at an excessive angle may cause the product to fall and an injury may result.

Do not place heavy objects on the product.

- Product failure or personal injury may result.

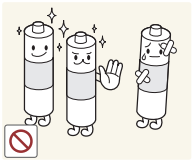
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



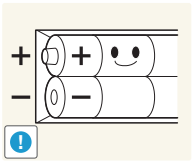
Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



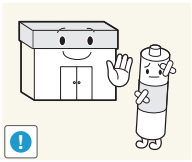
When replacing the battery, insert it with the right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



Use only the specified standardized batteries, and do not use a new battery and a used battery at the same time.

- Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.



The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

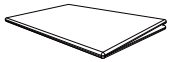
- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

Chapter 02
Preparations

Checking the Components

- Contact the vendor where you purchased the product if any components are missing.
- The appearance of the components and items sold separately may differ from the image shown.
- A stand is not provided with the product. To install a stand, you can purchase one separately.
- Components may differ in different locations.

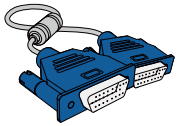
Components



Quick setup guide

Warranty card

(Not available in some locations)

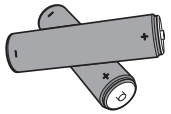


D-SUB cable (P.37)

Power cord

Remote Control (P.20)

(AA59-00714A)

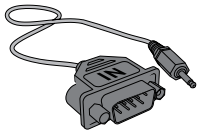


Batteries (P.21)

(Not available in some locations)

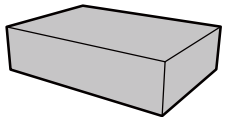
Holder-Wire stand

Holder-Ring (4EA)

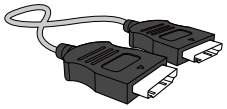


RS232C(IN) adapter

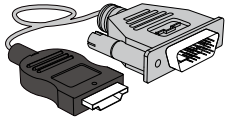
Items sold separately



Wall-mount Kit

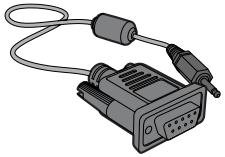


HDMI cable (P.39)

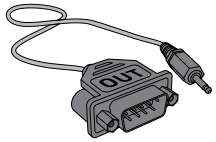


HDMI-DVI cable (P.38)

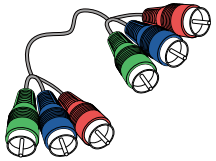
PIM



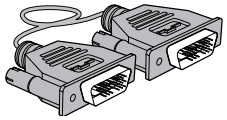
RS232C-Stereo cable



RS232C(OUT) adapter



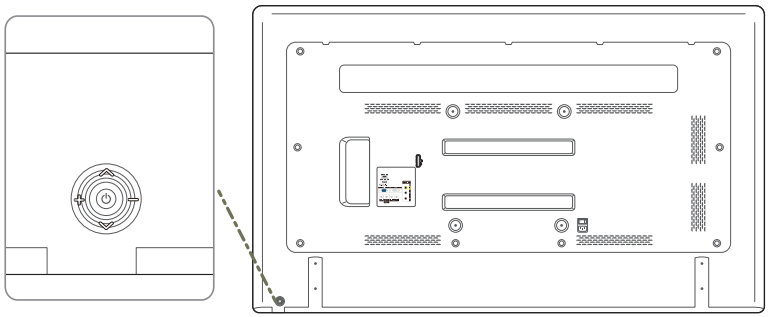
Component cable (P.40)



DVI cable (P.38)

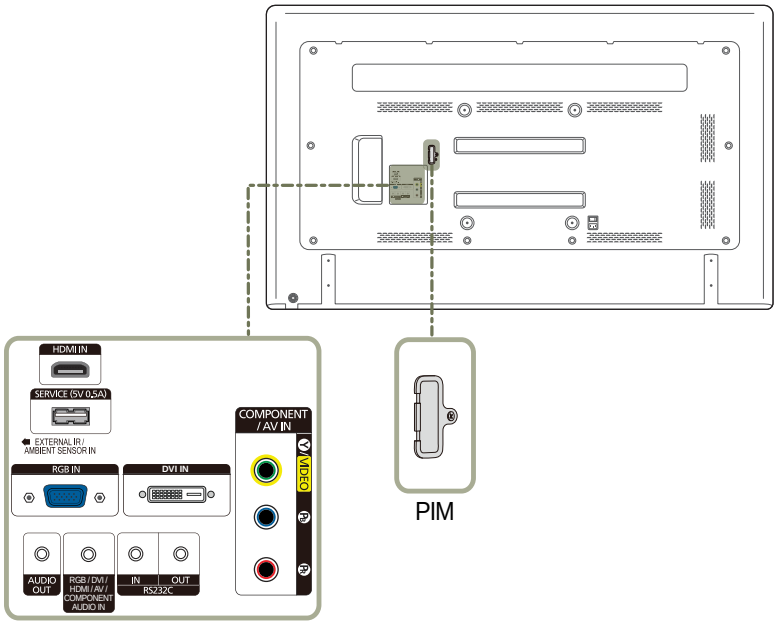
Parts

Panel Key



	Power on the product. If you press the [⏻] button when the product is turned on, the control menu will be displayed. To exit the OSD menu, press and hold the panel key for at least one second.
	Move to the upper or lower menu. You can also adjust the value of an option.
	Move to the left or right menu. You can adjust the volume by moving the panel key left or right when the control menu is not displayed.

Reverse Side

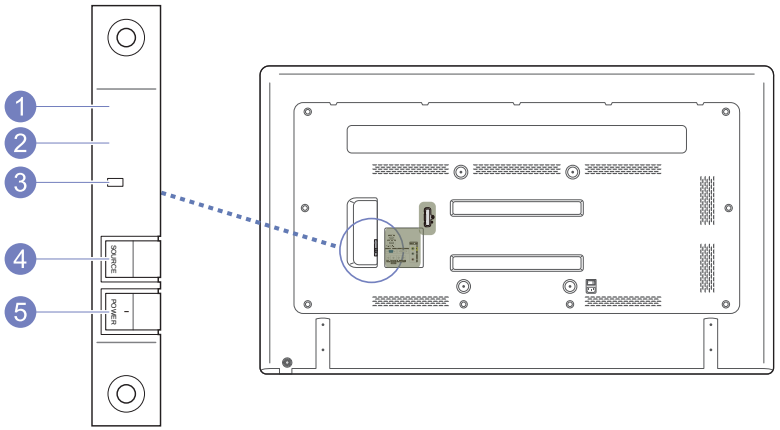


Port	Description
HDMI IN	Connects to a source device using an HDMI cable.
SERVICE (5V 0.5A)	This port is used to upgrade the software.
EXTERNAL IR / AMBIENT SENSOR IN	Supplies power to the External ambient sensor board or receives the light sensor signal. External ambient sensor: Sold separately
RGB IN	Connects to a source device using a D-SUB cable.
DVI IN	Connects to a source device using a DVI cable or HDMI-DVI cable.
AUDIO OUT	Connects to the audio of a source device.
RGB / DVI / HDMI / AV / COMPONENT AUDIO IN	Connect to audio input using an audio cable.
RS232C IN	Connects to MDC using an RS232C-stereo adapter.
RS232C OUT	
PIM	Connects to a PIM. (Refer to the PIM user manual for details.)
COMPONENT / AV IN	Connects to a source device using the Component/AV cable.

External sensor KIT

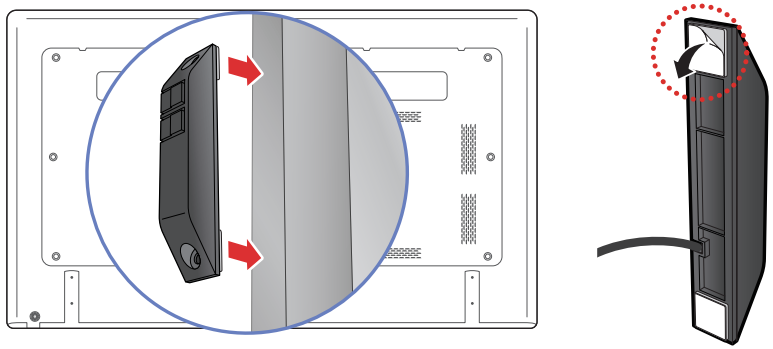
— The External sensor KIT has a remote-control sensor, a brightness sensor and function keys. If mounting the display onto a wall, you can move the External sensor KIT to the side of the display.

— The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



Buttons		Description
1	**Remote Control Sensor**	Aim the remote control towards this spot on the LCD Display. — Keep the area between the remote sensor and remote control obstacle-free. Use the remote control within 7m to 10m from the sensor on the product at an angle of 30˚ from the left and right. — Store used batteries out of reach of children and recycle. — Do not use a new and used battery together. Replace both batteries at the same time. — Remove batteries when the remote control is not to be used for an extended period of time.
2	**Light sensor**	Automatically detects the intensity of ambient light around a selected display and adjusts the screen brightness.
3	**Power indicator**	Turns off in power-on mode and blinks green in power-saving mode.
4	**SOURCE button**	Switches from PC mode to Video mode. Selects the input source that an external device is connected to.
5	**POWER button**	Use this button for turning the LCD Display on and off.

Attaching the External sensor KIT to the side

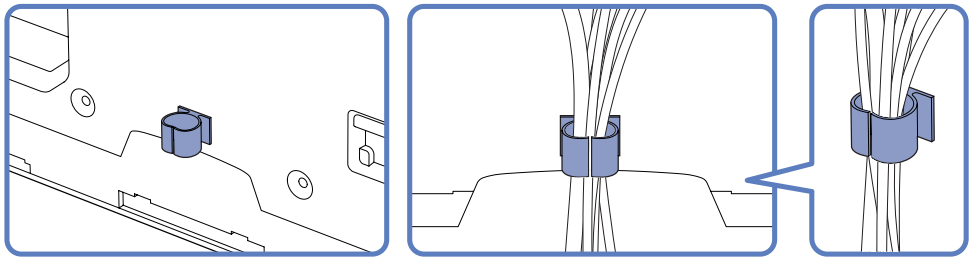


— This External sensor KIT can be attached to any part of the display using the double-sided tape provided with the sensor.

— The External sensor KIT can also be attached to a wall near the display.

— Do not attach the External sensor KIT to the display if the display does not have plastic or metal sides. The display can be damaged.

Assembling the Holder-Wire stand



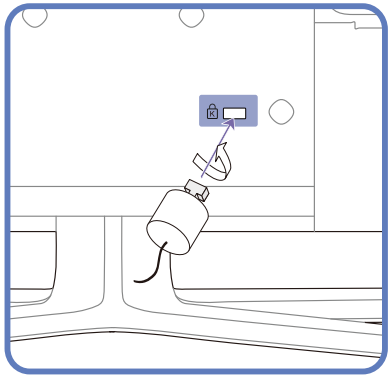
Anti-theft Lock

— An anti-theft lock allows you to use the product securely even in public places.

— The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.

To lock an anti-theft locking device:

— Stand: Sold separately



1 Fix the cable of your anti-theft locking device to a heavy object such as a desk.

2 Put one end of the cable through the loop on the other end.

3 Insert the locking device into the anti-theft lock slot at the back of the product.

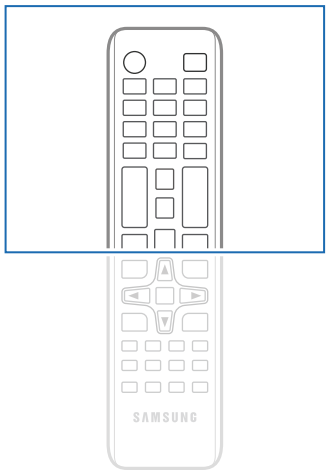
4 Lock the locking device.

- An anti-theft locking device can be purchased separately.
- Refer to the user guide provided with your anti-theft locking device for details.
- Anti-theft locking devices can be purchased at electronics retailers or online.

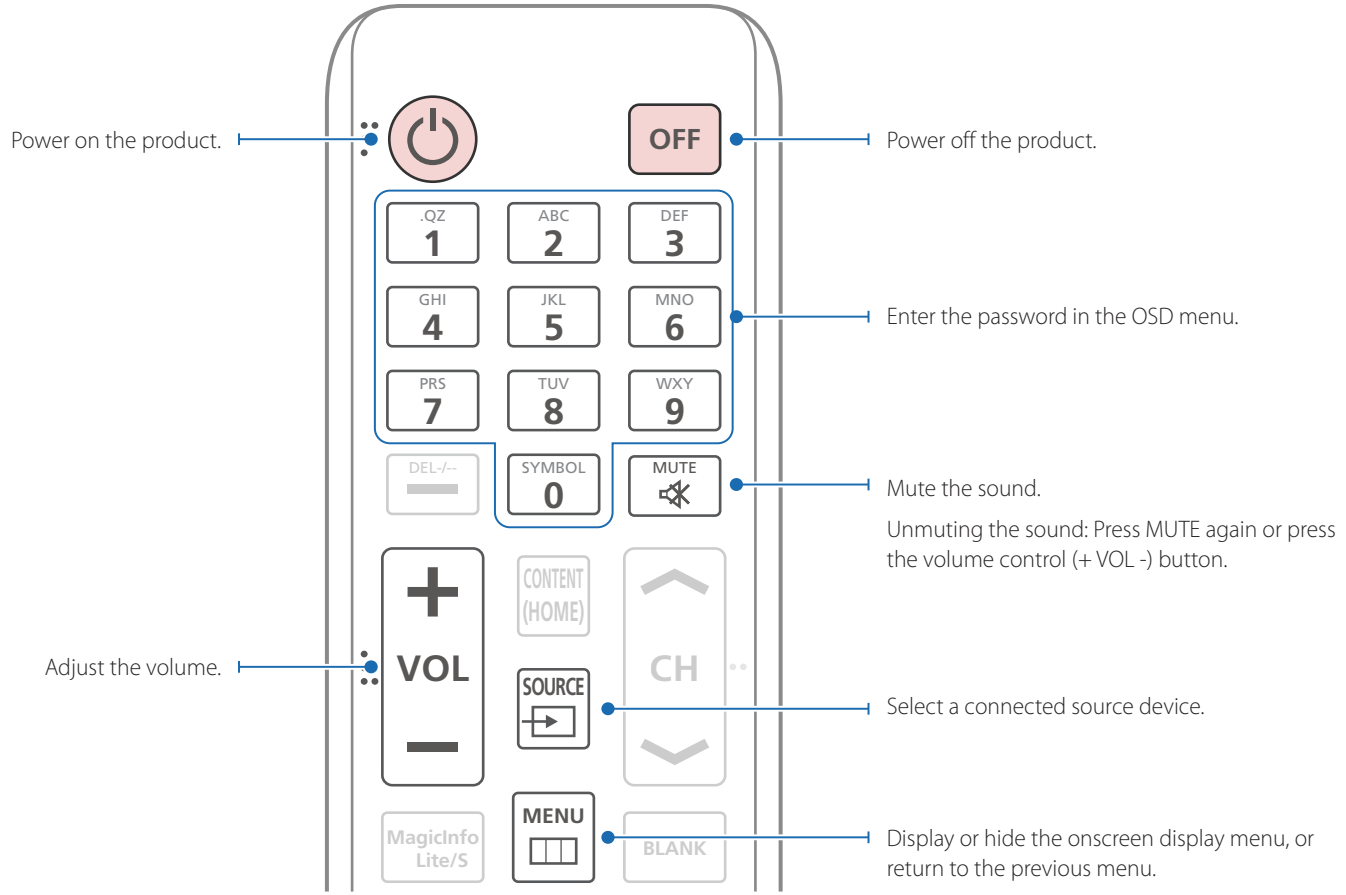
Remote Control

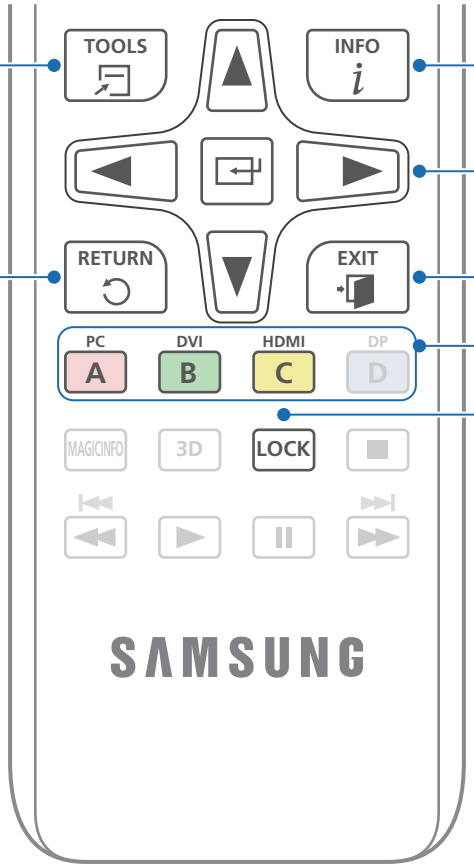
— Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.

— A button without a description in the image below is not supported on the product.



– Remote control button functions may differ for different products.





Quickly select frequently used functions.

Display information on the screen.

Move to the upper, lower, left or right menu, or adjust an option's setting.

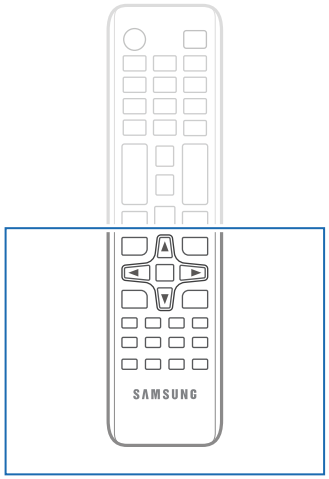
Confirm a menu selection.

Return to the previous menu.

Exit the current menu.

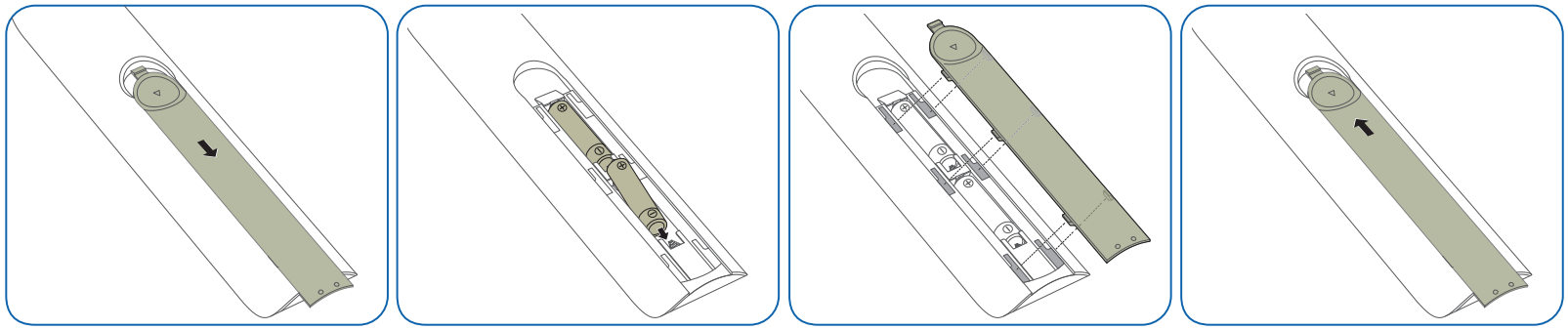
Manually select a connected input source from **PC**, **DVI**, **HDMI**.

It sets safe lock function.

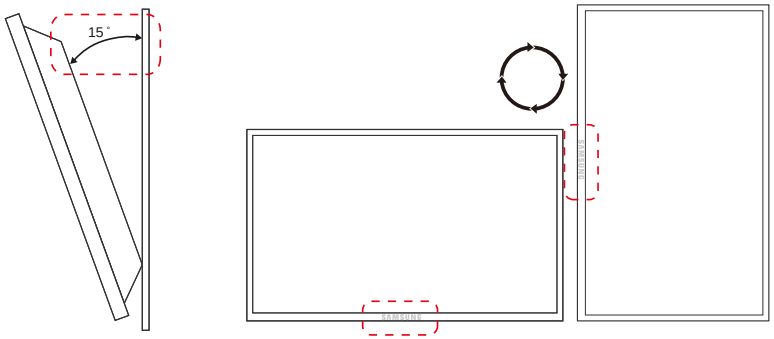


– Remote control button functions may differ for different products.

To place batteries in the remote control



Before Installing the Product (Installation Guide)



To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

- Ensure that an authorized installation company installs the wall mount.
- Otherwise, it may fall and cause personal injury.
- Make sure to install the specified wall mount.

Tilting Angle and Rotation

— Contact Samsung Customer Service Center for further details.

- The product can be tilted at a maximum angle of 15˚ from a perpendicular wall surface.
- To use the product vertically (portrait), turn it clockwise so that the LED is pointing down.

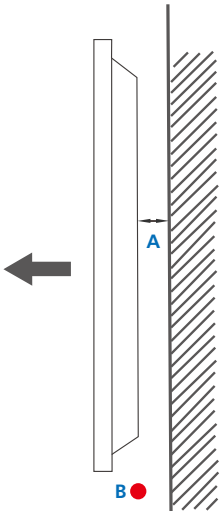


Figure 1.1 Side view

Ventilation

Installation on a Perpendicular Wall

A Minimum 40 mm

B Ambient temperature: Under 35˚C

- When installing the product on a perpendicular wall, allow at least 40 mm of space between the product and wall surface for ventilation and ensure that the ambient A temperature is kept below 35˚C.

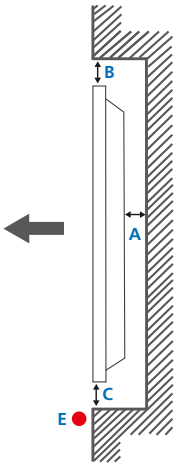
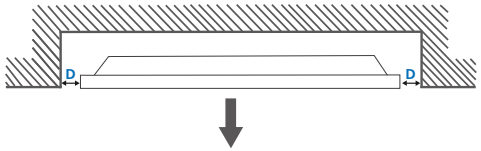


Figure 1.2 Side view

Figure 1.3 Side view



Installation on an Indented Wall

— Contact Samsung Customer Service Center for further details.

Plane view

A Minimum 40 mm

B Minimum 70 mm

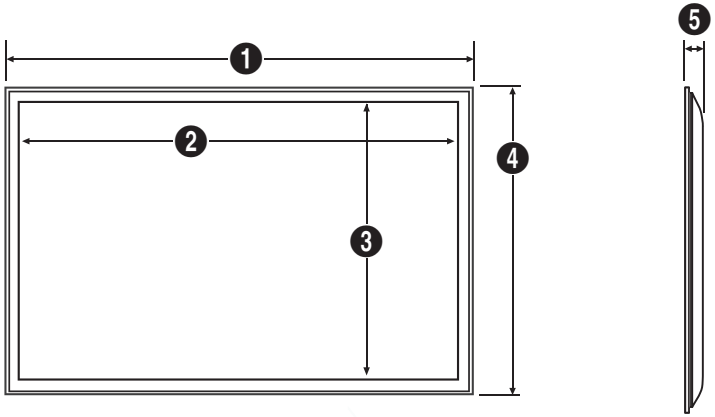
C Minimum 50 mm

D Minimum 50 mm

E Ambient temperature: Under 35˚C

— When installing the product on an indented wall, allow at least the space specified above between the product and wall for ventilation and ensure that the ambient temperature is kept below 35˚C.

Dimensions

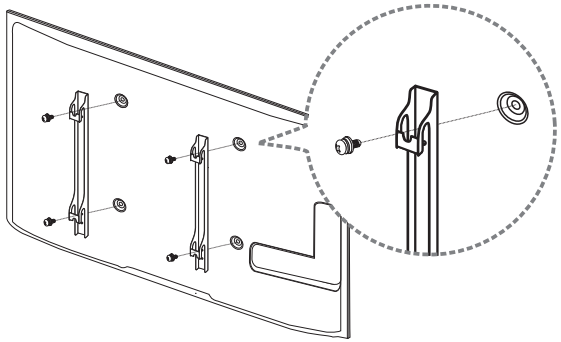


Unit: mm (inches)

Model name	1	2	3	4	5
ED65D	1467.5 (57.8)	1431.4 (56.4)	806.5 (31.8)	848.0 (33.4)	65.0 (2.6)
ED75D	1675.0 (65.9)	1653.3 (65.1)	931.3 (36.7)	958.5 (37.7)	65.0 (2.6)

— All drawings are not necessarily to scale. Some dimensions are subject to change without prior notice.
Refer to the dimensions prior to performing installation of your product. Not responsible for typographical or printed errors.

Installing the Wall Mount



Installing the Wall Mount Kit

The wall mount kit (sold separately) allows you to mount the product on the wall.

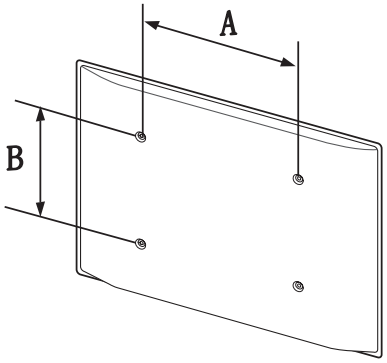
For detailed information on installing the wall mount, see the instructions provided with the wall mount.

We recommend you contact a technician for assistance when installing the wall mount bracket.

Samsung Electronics is not responsible for any damage to the product or injury to yourself or others if you elect to install the wall mount on your own.

Wall Mount Kit Specifications (VESA)

— Install your wall mount on a solid wall perpendicular to the floor. Before attaching the wall mount to surfaces other than plaster board, please contact your nearest dealer for additional information.
If you install the product on a slanted wall, it may fall and result in severe personal injury.



- Samsung wall mount kits contain a detailed installation manual and all parts necessary for assembly are provided.
- Do not use screws that are longer than the standard length or do not comply with the VESA standard screw specifications. Screws that are too long may cause damage to the inside of the product.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on the wall mount specifications.
- Do not fasten the screws too firmly. This may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
- Samsung is not liable for product damage or personal injury when a non-VESA or non-specified wall mount is used or the consumer fails to follow the product installation instructions.
- Do not mount the product at more than a 15 degree tilt.
- Always have two people mount the product on a wall.
- Standard dimensions for wall mount kits are shown in the table below.

Unit: mm (inches)

Model name	VESA screw hole specs (A * B) in millimeters	Standard Screw	Quantity
ED65D	400 x 400 (15.7 × 15.7)	M8, L32	4 EA
ED75D			

— Do not install your Wall Mount Kit while your product is turned on. It may result in personal injury due to electric shock.

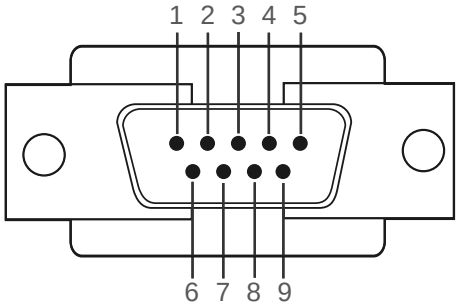
Remote Control (RS232C)

Cable Connection

RS232C Cable

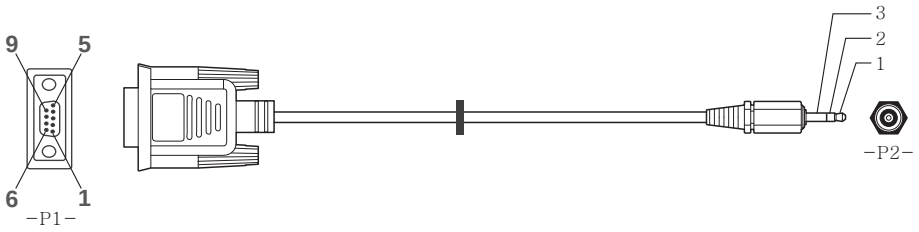
Interface	RS232C (9 pins)
Pin	TxD (No.2), RxD (No.3), GND (No.5)
Bit rate	9600 bps
Data bits	8 bit
Parity	None
Stop bit	1 bit
Flow control	None
Maximum length	15 m (only shielded type)

- Pin assignment



Pin	Signal
1	Detect data carrier
2	Received data
3	Transmitted data
4	Prepare data terminal
5	Signal ground
6	Prepare data set
7	Send request
8	Clear to send
9	Ring indicator

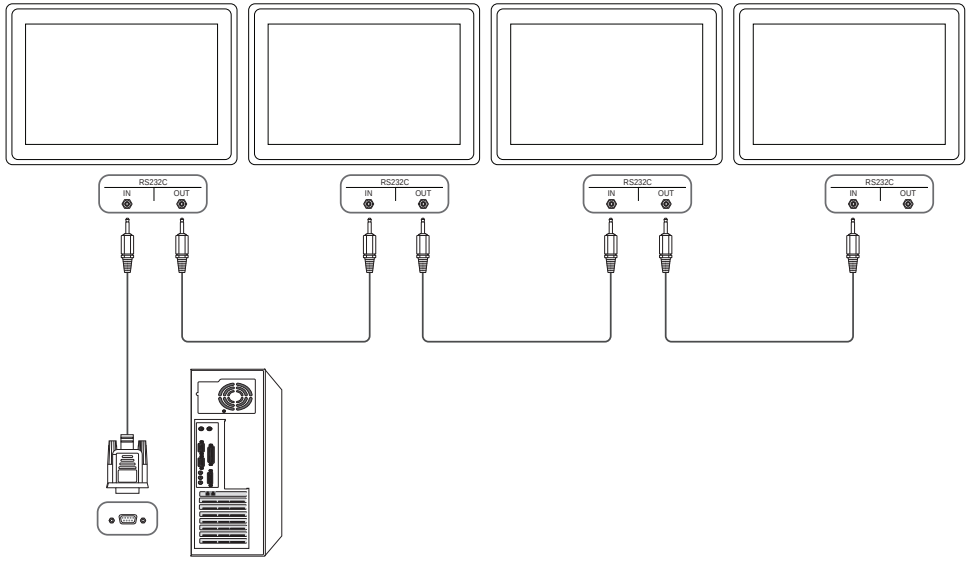
- RS232C cable
  Connector: 9-Pin D-Sub to Stereo Cable



-P1-		-P1-		-P2-		-P2-
Female	**Rx**	**2**	**--------->**	**3**	**Tx**	**STEREO**
	Tx	**3**	**<---------**	**2**	**Rx**	**PLUG**
	Gnd	**5**	**----------**	**5**	**Gnd**	**(3.5ø)**

Connection

- Connection 1



Control Codes

Viewing control state (Get control command)

Header	Command	ID	Data length	Checksum
0xAA	Command type		0	

Controlling (Set control command)

Header	Command	ID	Data length	Data	Checksum
0xAA	Command type		1	Value	

Command

No.	Command type	Command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Screen mode control	0x18	-
5	Screen size control	0x19	0~255
6	PIP on/off control	0x3C	0~1
7	Auto adjustment control (PC and BNC only)	0x3D	0
8	Video wall mode control	0x5C	0~1
9	Safety Lock	0x5D	0~1
10	Video Wall On	0x84	0~1
11	Video Wall User Control	0x89	-

- All communications take place in hexadecimals. The checksum is calculated by adding up all values except the header. If a checksum adds up to be more than 2 digits as shown below (11+FF+01+01=112), the first digit is removed.

E.g. Power On & ID=0

Header	Command	ID	Data length	Data 1	Checksum
0xAA	0x11		1	"Power"	

Header	Command	ID	Data length	Data 1	12
0xAA	0x11		1	1	

- To control all devices connected by a serial cable simultaneously irrespective of IDs, set the ID as "0xFE" and transmit commands. Commands will be executed by each device but ACK will not respond.

Power control

- Function
  A product can be powered on and off using a PC.
- Viewing power state (Get Power ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x11		0	

- Setting power ON/Off (Set Power ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x11		1	"Power"	

"Power": Power code to be set on a product.

1: Power ON

0: Power OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x11	"Power"	

"Power": Power code to be set on a product.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x11	"ERR"	

"ERR" : A code showing what error has occurred.

Volume control

- Function
  The volume of a product can be adjusted using a PC.
- Viewing volume state (Get Volume Status)

Header	Command	ID	Data length	Checksum
0xAA	0x12		0	

- Setting the volume (Set Volume)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x12		1	"Volume"	

"Volume": Volume value code to be set on a product. (0-100)

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x12	"Volume"	

"Volume": Volume value code to be set on a product. (0-100)

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x12	"ERR"	

"ERR" : A code showing what error has occurred.

Input source control

- Function
  The input source of a product can be changed using a PC.
- Viewing input source state (Get Input Source Status)

Header	Command	ID	Data length	Checksum
0xAA	0x14		0	

- Setting the input source (Set Input Source)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x14		1	"Input Source"	

"Input Source": An input source code to be set on a product.

0x14	PC
0x18	DVI
0x0C	Input source
0x08	Component
0x20	MagicInfo
0x1F	DVI_video
0x30	RF(TV)
0x40	DTV
0x21	HDMI
0x22	HDMI_PC

— DVI_video, HDMI_PC cannot be used with the Set command. They only respond to "Get" commands.

— This model does not support HDMI, HDMI_PC ports.

— **MagicInfo** is only available with models that contain the **MagicInfo** function.

— RF(TV), DTV are only available with models that include a TV.

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x14	"Input Source"	

"Input Source": An input source code to be set on a product.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x14	"ERR"	

"ERR" : A code showing what error has occurred.

Screen mode control

- Function
  The screen mode of a product can be changed using a PC.
  Screen mode cannot be controlled when the **Video Wall** function is enabled.

  — This control can only be used on models that include a TV.

- Viewing screen status (Get Screen Mode Status)

Header	Command	ID	Data length	Checksum
0xAA	0x18		0	

- Setting the picture size (Set Picture Size)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x18		1	"Screen Mode"	

"Screen Mode": A code that sets the product status

0x01	16 : 9
0x04	Zoom
0x31	Wide Zoom
0x0B	4 : 3

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x18	"Screen Mode"	

"Screen Mode": A code that sets the product status

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x18	"ERR"	

"ERR": A code showing what error has occurred

Screen size control

- Function
  The screen size of a product can be changed using a PC.

- Viewing the screen size (Get Screen Size Status)

Header	Command	ID	Data length	Checksum
0xAA	0x19		0	

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x19	"Screen Size"	

"Screen Size": product screen size (range: 0 – 255, unit: inch)

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x19	"ERR"	

"ERR": A code showing what error has occurred

PIP On/Off control

- Function
  The PIP mode of a product can be turned on or off using a PC.
  — Only available on models that have the PIP function.
  — The mode cannot be controlled if **Video Wall** is set to **On**.
  — This function is not available in **MagicInfo**.
- Viewing PIP on/off state (Get the PIP ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x3C		0	

- Setting PIP on/off (Set the PIP ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x3C		1	"PIP"	

"PIP": A code used to turn the PIP mode of a product on or off

1: PIP ON

0: PIP OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3C	"PIP"	

"PIP": A code used to turn the PIP mode of a product on or off

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3C	"PIP"	

"ERR": A code showing what error has occurred

Auto adjustment control (PC and BNC only)

- Function
  Automatically adjust the PC system screen using a PC.
- Viewing auto adjustment state (Get Auto Adjustment Status)
  None
- Setting auto adjustment (Set Auto Adjustment)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x3D		1	"Auto Adjustment"	

"Auto Adjustment" : 0x00 (at all times)

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3D	"Auto Adjustment"	

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3D	"ERR"	

"ERR": A code showing what error has occurred

Video Wall Mode Control

- Function
  Video Wall mode can be activated on a product using a PC.
  This control is only available on a product whose **Video Wall** is enabled.
- Viewing video wall mode (Get Video Wall Mode)

Header	Command	ID	Data length	Checksum
0xAA	0x5C		0	

- Setting the video wall (Set Video Wall Mode)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5C		1	"Video Wall Mode"	

"Video Wall Mode": A code used to activate Video Wall mode on a product

1: **Full**

0: **Natural**

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5C	"Video Wall Mode"	

"Video Wall Mode": A code used to activate Video Wall mode on a product

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5C	"ERR"	

"ERR": A code showing what error has occurred

Safety Lock

- Function
  PC can be used to turn the **Safety Lock** function on or off on a product.
  This control is available regardless of whether or not the power is turned on.
- Viewing the safety lock state (Get Safety Lock Status)

Header	Command	ID	Data length	Checksum
0xAA	0x5D		0	

- Enabling or disabling safety lock (Set Safety Lock Enable / Disable)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5D		1	"Safety Lock"	

"Safety Lock": Safety lock code to be set on a product

1: ON

0: OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5D	"Safety Lock"	

"Safety Lock": Safety lock code to be set on a product

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x5D	"ERR"	

"ERR": A code showing what error has occurred

Video Wall On

- Function
  Turn Video Wall on or off on the product from your computer.
- Get Video Wall On/Off Status

Header	Command	ID	Data length	Checksum
0xAA	0x84		0	

- Set Video Wall On/Off

Header	Command	ID	Data length	Data	Checksum
0xAA	0x84		1	V.Wall_On	

- V.Wall_On: Video Wall code to be assigned to the product

1: Video Wall ON

0: Video Wall OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x84	V.Wall_On	

V.Wall_On : Same as above

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x84	ERR	

"ERR": A code showing what error has occurred

Video Wall User Control

- Function
  Turn the Video Wall function on or off on the product from your computer.
- Get Video Wall Status

Header	Command	ID	Data length	Checksum
0xAA	0x89		0	

- Set Video Wall

Header	Command	ID	Data length	Val1	Val2	Checksum
0xAA	0x89		2	Wall_Div	Wall_SNo	

Wall_Div: Video Wall Divider code assigned to the product

10x10 Video Wall Model

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Off	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
1	0x11	0x12	0x13	0x14	0x15	0x16	0x17	0x18	0x19	0x1A	0x1B	0x1C	0x1D	0x1E	0x1F
2	0x21	0x22	0x23	0x24	0x25	0x26	0x27	0x28	0x29	0x2A	0x2B	0x2C	0x2D	0x2E	0x2F
3	0x31	0x32	0x33	0x34	0x35	0x36	0x37	0x38	0x39	0x3A	0x3B	0x3C	0x3D	0x3E	0x3F
4	0x41	0x42	0x43	0x44	0x45	0x46	0x47	0x48	0x49	0x4A	0x4B	0x4C	0x4D	0x4E	0x4F
5	0x51	0x52	0x53	0x54	0x55	0x56	0x57	0x58	0x59	0x5A	0x5B	0x5C	0x5D	0x5E	0x5F
6	0x61	0x62	0x63	0x64	0x65	0x66	0x67	0x68	0x69	0x6A	0x6B	0x6C	0x6D	0x6E	0x6F
7	0x71	0x72	0x73	0x74	0x75	0x76	0x77	0x78	0x79	0x7A	0x7B	0x7C	0x7D	0x7E	N/A
8	0x81	0x82	0x83	0x84	0x85	0x86	0x87	0x88	0x89	0x8A	0x8B	0x8C	N/A	N/A	N/A
9	0x91	0x92	0x93	0x94	0x95	0x96	0x97	0x98	0x99	0x9A	0x9B	N/A	N/A	N/A	N/A
10	0xA1	0xA2	0xA3	0xA4	0xA5	0xA6	0xA7	0xA8	0xA9	0xAA	N/A	N/A	N/A	N/A	N/A
11	0xB1	0xB2	0xB3	0xB4	0xB5	0xB6	0xB7	0xB8	0xB9	N/A	N/A	N/A	N/A	N/A	N/A
12	0xC1	0xC2	0xC3	0xC4	0xC5	0xC6	0xC7	0xC8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	0xD1	0xD2	0xD3	0xD4	0xD5	0xD6	0xD7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	0xE1	0xE2	0xE3	0xE4	0xE5	0xE6	0xE7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	0xF1	0xF2	0xF3	0xF4	0xF5	0xF6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Wall_SNo: Product Number code assigned to the product

10x10 Video Wall Model : (1 ~ 100)

Set Number	Data
1	0x01
2	0x02
...	...
99	0x63
100	0x64

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Val2	Checksum
0xAA	0xFF		4	'A'	0x89	Wall_Div	Wall_SNo	

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x89	ERR	

"ERR": A code showing what error has occurred

Chapter 03
Connecting and Using a Source Device

Before Connecting

Check the following before you connect this product with other devices. Devices that can be connected to this product include PCs, camcorders, speakers, set top boxes and DVD/Blu-ray Disc players.

Pre-connection Checkpoints

— Before connecting a source device, read the user manual provided with it.
The number and locations of ports on source devices may differ from device to device.

— Do not connect the power cable until all connections are completed.
Connecting the power cable during connection may damage the product.

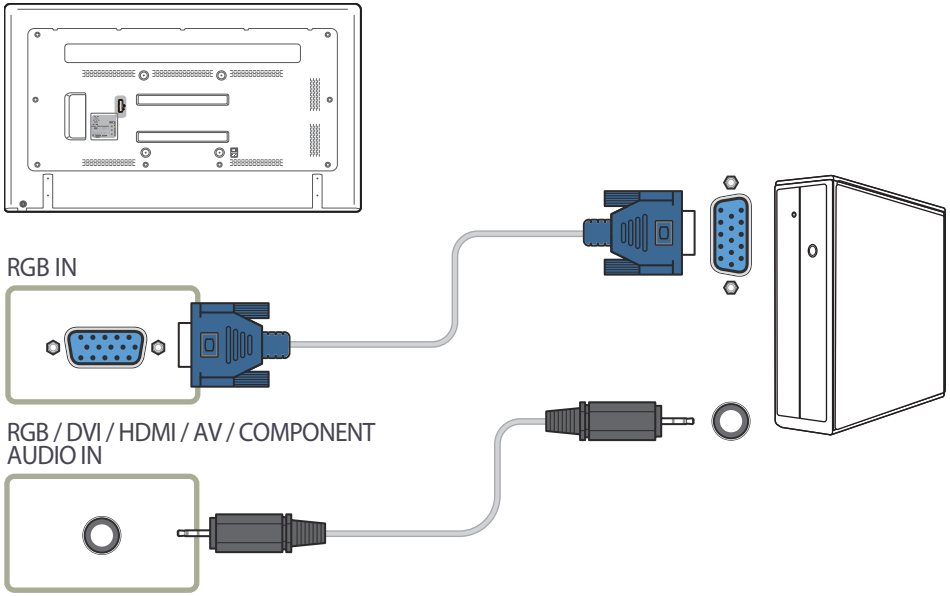
— Check the types of ports at the back of the product you want to connect.

Connecting to a PC

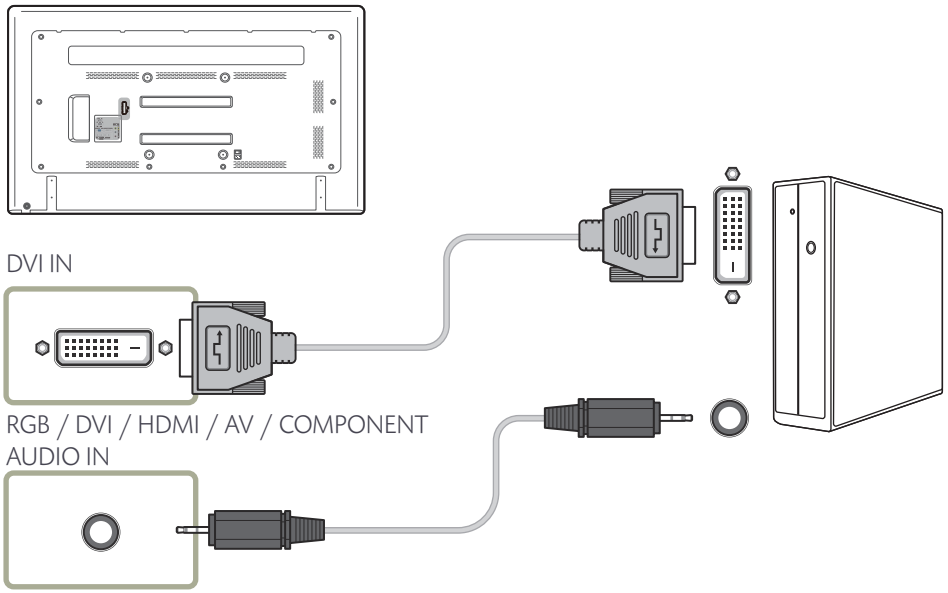
- Do not connect the power cable before connecting all other cables.
  Ensure you connect a source device first before connecting the power cable.
- A PC can be connected to the product in a variety of ways.
  Select a connection method suitable for your PC.

— Connecting parts may differ in different products.

Connection using the D-SUB cable (Analog type)

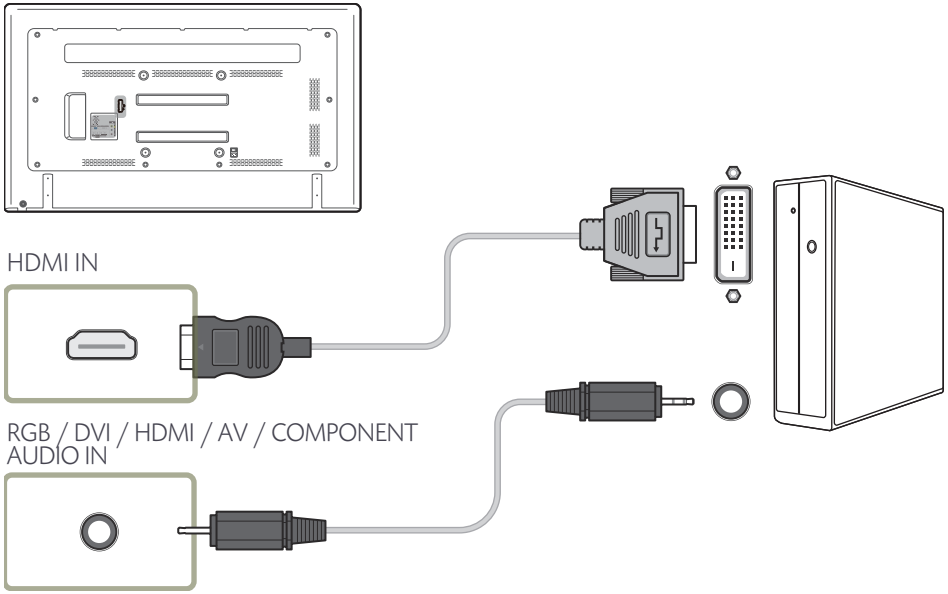


Connection using a DVI cable (Digital type)

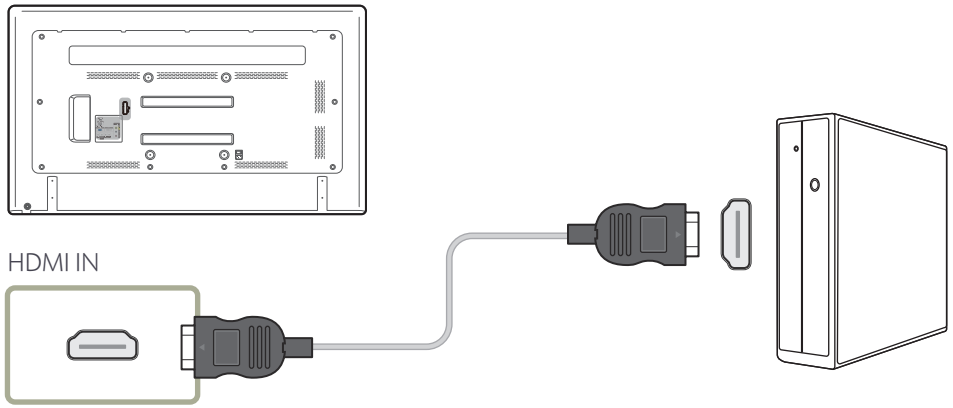


Connection Using an HDMI-DVI Cable

— When you connect a PC to the product using an HDMI-DVI cable, set **Edit Name** to **DVI PC** to access video and audio content stored on the PC.



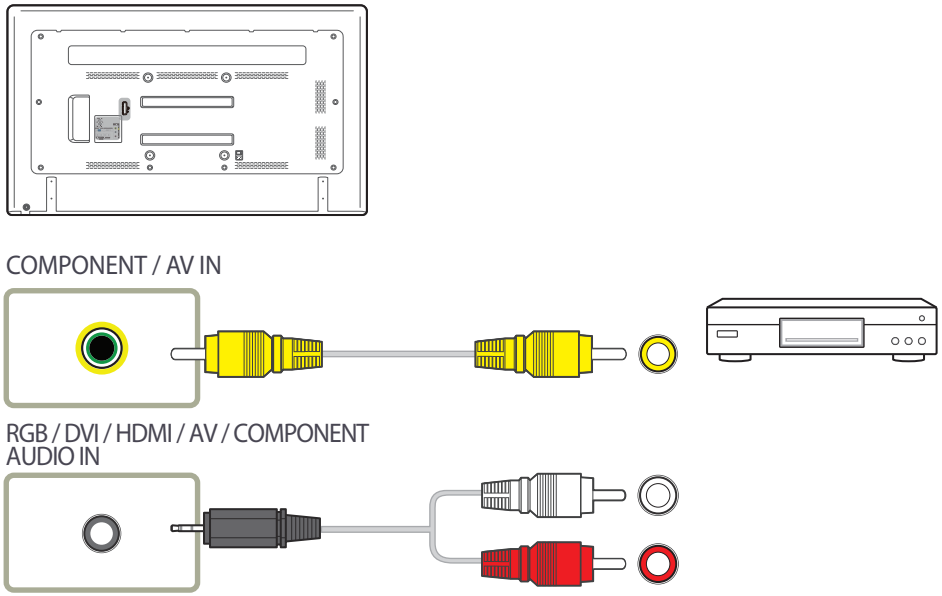
Connection Using an HDMI Cable



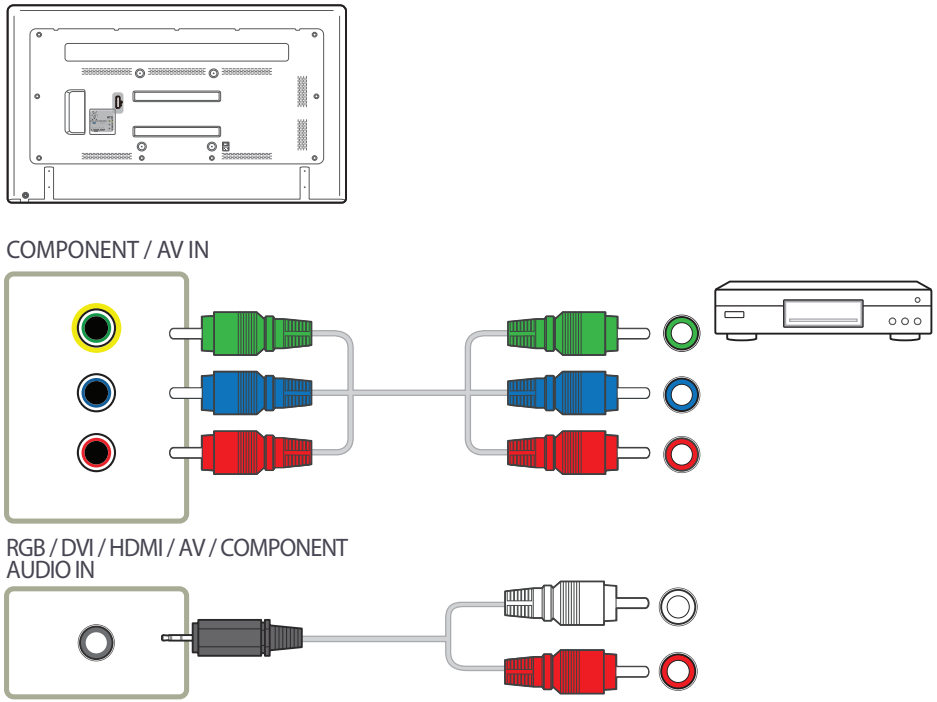
Connecting to a Video Device

- Do not connect the power cable before connecting all other cables.
  Ensure you connect a source device first before connecting the power cable.
- You can connect a video device to the product using a cable.
  - Connecting parts may differ in different products.
  - Press the **SOURCE** button on the remote control to change the source.

Connection Using an AV Cable



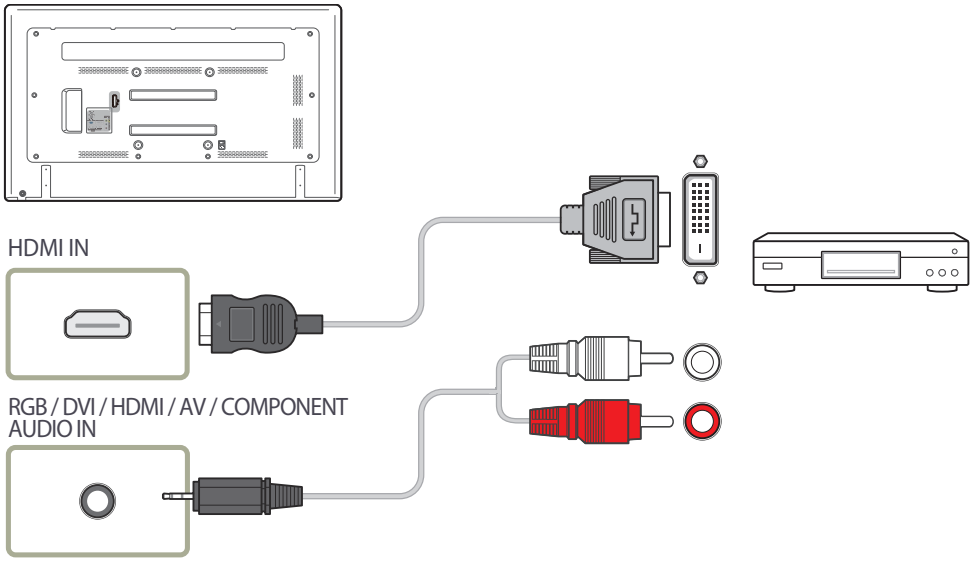
Connection Using the component Cable



Connection Using an HDMI-DVI Cable

— Audio will not be enabled if the product is connected to a video device using an HDMI-DVI cable. To resolve this, additionally connect an audio cable to the audio ports on the product and video device. When you connect a video device to the product using an HDMI-DVI cable, set **Edit Name** to **DVI Devices** to access video and audio content stored on the video device.

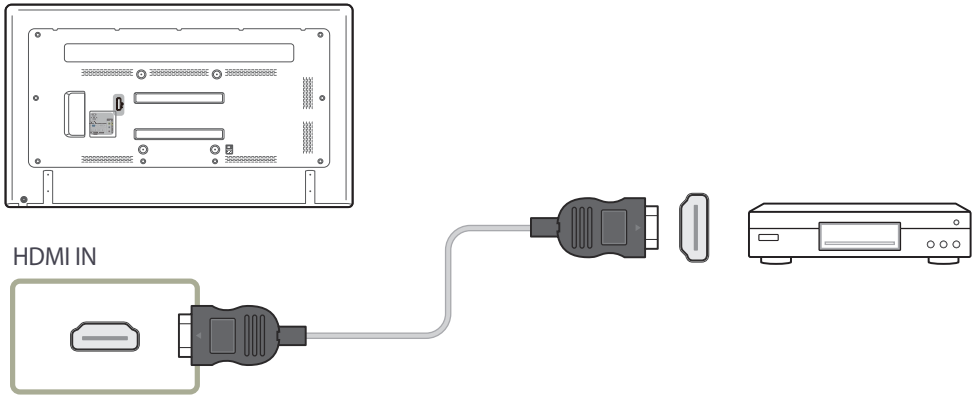
— Supported resolutions include 1080p (50/60Hz), 720p (50/60Hz), 480p, and 576p.



Connection Using an HDMI Cable

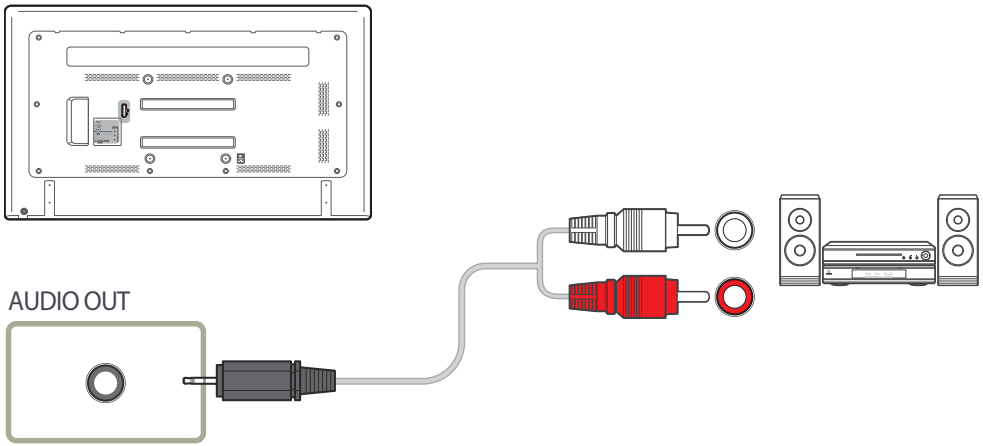
Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
  - To connect the product to a digital device that does not support HDMI output, use an HDMI-DVI and audio cables.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the product. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended.
  This product does not support the ethernet function via HDMI.



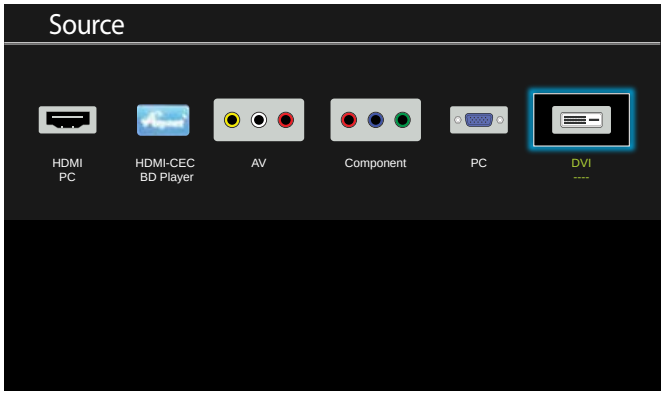
Connecting to an Audio System

— Connecting parts may differ in different products.



Changing the Input source

— The displayed image may differ depending on the model.



Source

MENU → **Applications** → **Source List** → **ENTER**

Source allows you to select a variety of sources and change source device names.

You can display the screen of a source device connected to the product. Select a source from source list to display the screen of the selected source.

— The input source can also be changed by using the **SOURCE** button on the remote control.

— The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

Chapter 04
Using MDC

MDC (Multiple Display Control) is an application that allows you to easily control multiple display devices simultaneously using a PC.

Configuring Settings for Multi Control

MENU → **System** → **Multi Control** → **ENTER**

Assign an individual ID to your product.

Configuring settings for Multi Control

- **ID Setup**
  Assign an ID to a set. (Range: 0~99)
  Press ▲/▼ to select a number, and press .
- **ID Input**
  Enter the ID number of the product connected to the input cable for input signal reception.
  Enter the number you want using the number buttons on the remote control.

For details on how to use the MDC program, refer to Help after installing the program. The MDC program is available on the website.

MDC installation can be affected by the graphics card, mother board and network conditions.

If the directory path is not specified, the program will be installed in the default directory path.

Select "**Launch MDC Unified**" and click "**Finish**" to run the MDC program immediately.

- The MDC execution icon may not be displayed depending on the PC system or product specifications.
- Press F5 if the execution icon is not displayed.

MDC Program Installation/Uninstallation

Installation

1 Click the **MDC Unified** installation program.

2 Select a language for installation. Next, click "**OK**".

3 When the "**Welcome to the InstallShield Wizard for MDC_Unified**" screen appears, click "**Next**".

4 In the "**License Agreement**" window displayed, select "**I accept the terms in the license agreement**" and click "**Next**".

5 In the displayed "**Customer Information**" window, fill out all the information fields and click "**Next**".

6 In the displayed "**Destination Folder**" window, select the directory path you want to install the program in and click "**Next**".

7 In the displayed "**Ready to Install the Program**" window, check the directory path to install the program in and click "**Install**".

8 Installation progress will be displayed.

9 Click "**Finish**" in the displayed "**InstallShield Wizard Complete**" window.

10 The **MDC Unified** shortcut icon will be created on the desktop after installation.

Uninstallation

1 Select **Settings** > **Control Panel** on the **Start** menu and double-click **Add/Delete Program**.

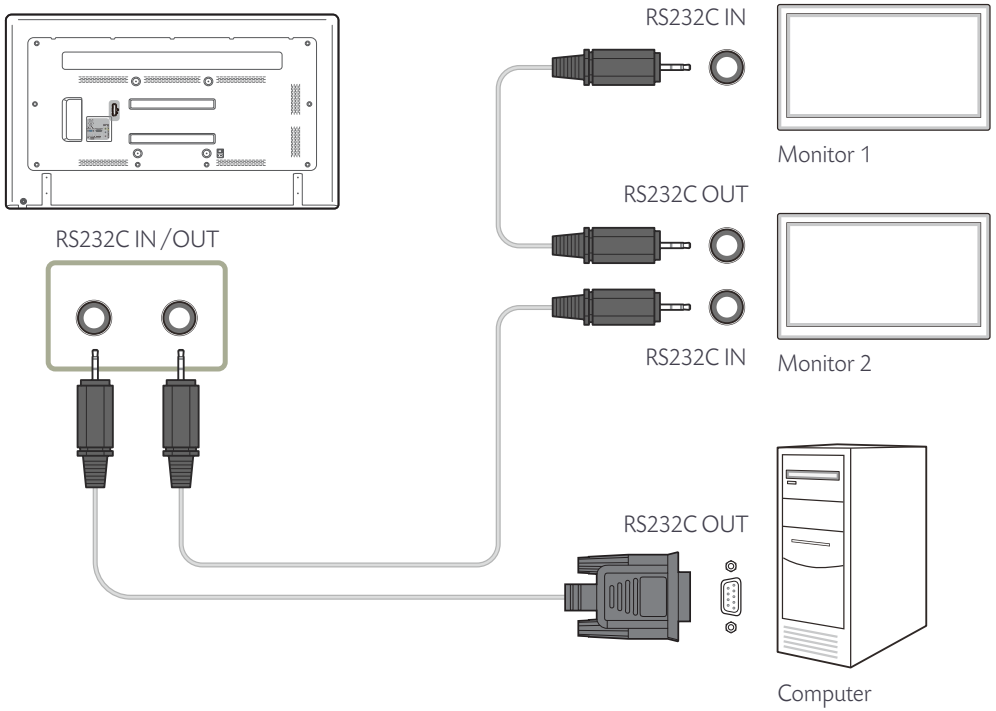
2 Select **MDC Unified** from the list and click **Change/Remove**.

Connecting to MDC

Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC.

Using MDC via RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.



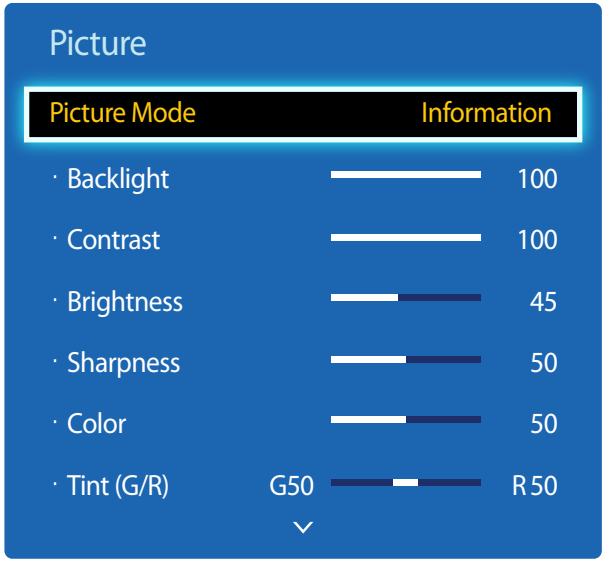
Chapter 05
Screen Adjustment

Configure the **Picture** settings (**Backlight**, **Color Tone**, etc.).

– The layout of the **Picture** menu options may vary depending on the product.

Picture Mode

MENU → **Picture** → **Picture Mode** → ENTER



– The displayed image may differ depending on the model.

Select a picture mode (**Picture Mode**) suitable for the environment where the product will be used.

Different **Picture Mode** options are displayed depending on the current input source.

If the input source is PC, DVI, HDMI(PC)

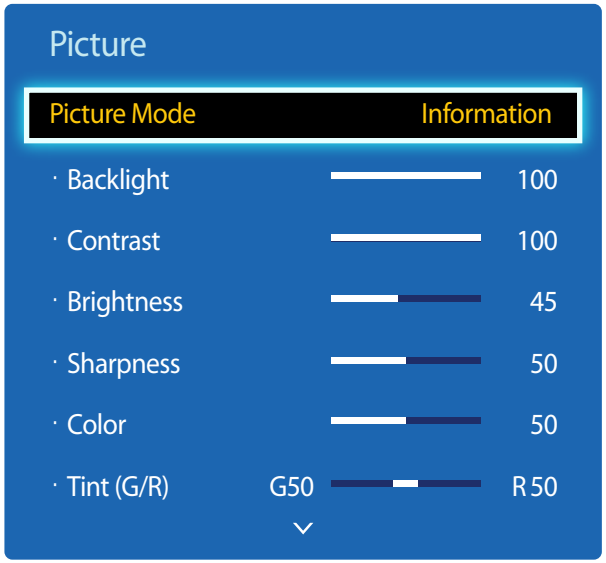
- **Information**: This mode reduces eye fatigue and is suitable for displaying information to the public.
- **Advertisement**: This mode is suitable for displaying video content and indoor/outdoor advertisements.

If the input source is AV, Component, HDMI(AV)

- **Dynamic**: This mode is suitable when the ambient light is bright.
- **Standard**: This mode is generally suitable for any environment.
- **Natural**: Suitable for reducing eye strain.
- **Movie**: This mode reduces eye fatigue.

Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)

MENU → Picture → ENTER



– The displayed image may differ depending on the model.

Your product has several options for adjusting picture quality.

Input source	Picture Mode	Adjustable options
PC, **HDMI**, **DVI** (when a PC is connected)	**Information** / **Advertisement**	**Backlight** / **Contrast** / **Brightness** / **Sharpness**
AV, **Component**, **HDMI** (720p, 1080i, 1080p)	**Dynamic** / **Standard** / **Natural** / **Movie**	**Backlight** / **Contrast** / **Brightness** / **Sharpness** / **Color** / **Tint (G/R)**

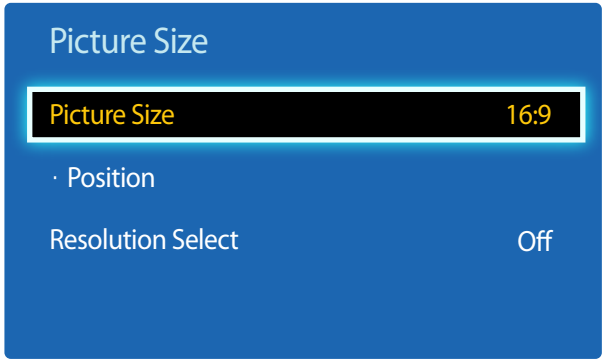
— When you make changes to **Backlight**, **Contrast**, **Brightness**, **Sharpness**, **Color** or **Tint (G/R)**, the OSD will be adjusted accordingly.

— You can adjust and store settings for each external device you have connected to an input on the product.

— Lowering picture brightness reduces power consumption.

Picture Size

MENU → Picture → Picture Size → ENTER



– The displayed image may differ depending on the model.

Picture Size

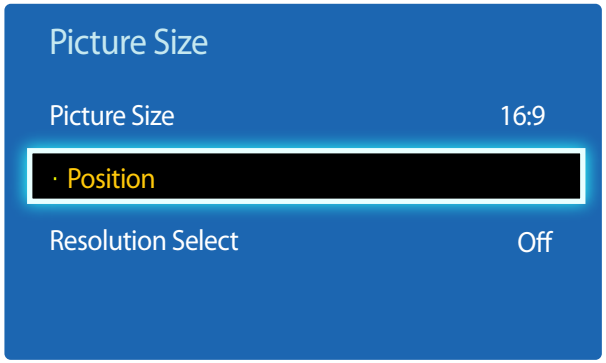
If you have a cable box or satellite receiver, it may have its own set of screen sizes as well. However, we highly recommend you use your product's 16:9 mode most of the time.

- **16:9**: Sets the picture to **16:9** wide mode.
- **Zoom1**: Use for moderate magnification. Cuts off the top and sides.
- **Zoom2**: Use for a stronger magnification.
- **Smart View 1**: Reduces the **16:9** picture by 50%.
  - **Smart View 1** is enabled only in **HDMI** mode.
- **Smart View 2**: Reduces the **16:9** picture by 25%.
  - **Smart View 2** is enabled only in **HDMI** mode.
- **Wide Fit**: Enlarges the aspect ratio of the picture to fit the entire screen.
- **4:3**: Sets the picture to basic (**4:3**) mode.
  - Do not set your product to **4:3** format for a long time.
    The borders displayed on the left and right, or top and bottom of the screen may cause image retention (screen burn) which is not covered by the warranty.
- **Screen Fit**: Displays the full image without any cut-off when **HDMI**(720p / 1080i / 1080p) signals are inputted.
- **Custom**: Changes the resolution to suit the user's preferences.
- **Original Ratio**: If the input source is **PC**, **DVI**, **HDMI**(PC connection) the video will display in the original aspect ratio.
  - Available ports may differ depending on the model.
  - You can adjust and store settings for each external device you have connected to an input on the product.

Picture Sizes available by Input Source.

Input Source	Picture Size
AV, **Component** (480i, 480p)	**16:9**/ **4:3**/ **Zoom1**/ **Zoom2**/ **Custom**
Component (1080i, 1080p)	**16:9**/ **4:3**/ **Wide Fit**/ **Screen Fit**/ **Custom**
HDMI (720p, 1080i, 1080p)	**16:9**/ **4:3**/ **Smart View 1**/ **Smart View 2**/ **Custom**/ **Wide Fit**/ **Screen Fit**
HDMI (480i, 480p)	**16:9**/ **4:3**/ **Zoom1**/ **Zoom2**/ **Smart View 1**/ **Smart View 2**/ **Custom**
PC, **DVI**, **HDMI** (when a PC is connected)	**16:9**/ **4:3**/ **Original Ratio**

Position



– The displayed image may differ depending on the model.

Adjusts the picture position. **Position** is only available if **Picture Size** is set to **Zoom1**, **Zoom2**, **Wide Fit**, **Screen Fit**.

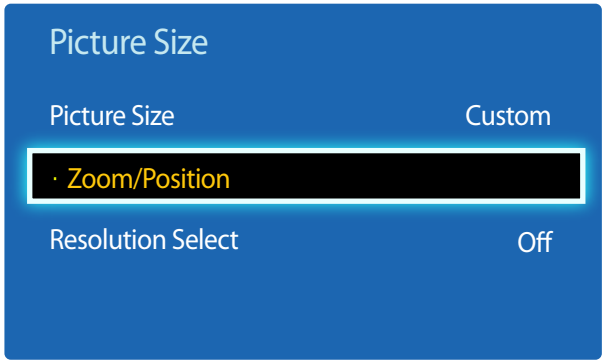
— To use the **Position** function after selecting **Zoom1**, **Zoom2**, **Wide Fit**, **Screen Fit** or **Original Ratio**, follow these steps.

1 Press the ▼ button to select **Position**. Press the ↵ button.

2 Press the ▲ or ▼ button to move the picture up or down.

3 Press the ↵ button.

Zoom/Position



– The displayed image may differ depending on the model.

— To use the **Zoom/Position** function after selecting **Custom** in **HDMI** (1080i/1080p) or **Component** (1080i/1080p) or **Custom**, follow these steps.

1 Press the ▼ button to select **Zoom/Position**. Press the ↵ button.

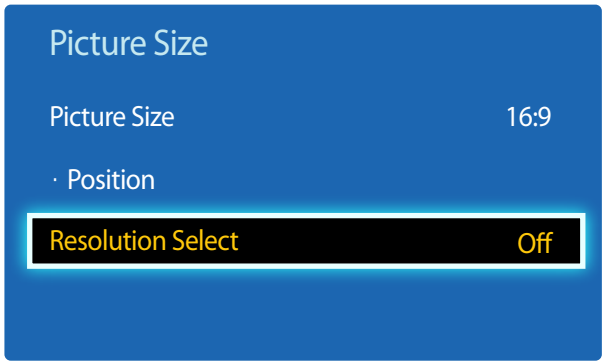
2 Select the **Zoom** or **Position**. Press the ↵ button.

3 Press the ▲ / ▼ / ◀ / ▶ button to move the picture up or down.

4 Press the ↵ button.

— If you want to reset the picture to its original position, select **Reset** in the **Zoom/Position** screen. The picture will be set to its default position.

Resolution Select



If the picture is not normal even when the resolution of the graphics card is one of the following, you can optimize the picture quality by selecting the same resolution for the product as the PC using this menu.

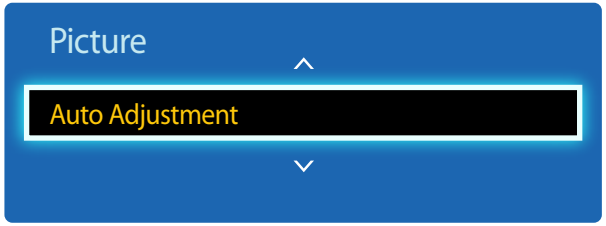
Available resolutions: **Off** / **1024x768** / **1280x768** / **1360x768** / **1366x768**

- Available in **PC** mode only.
- The displayed image may differ depending on the model.

Auto Adjustment

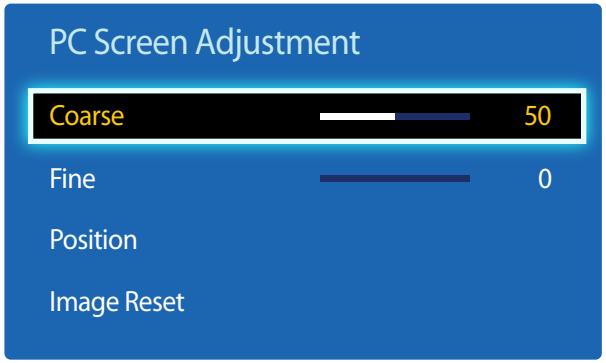
Adjust frequency values/positions and fine tune the settings automatically.

MENU → **Picture** → **Auto Adjustment** → **ENTER**



- Available in **PC** mode only.
- The displayed image may differ depending on the model.

PC Screen Adjustment



– The displayed image may differ depending on the model.

- **Coarse** / **Fine**

  Removes or reduces picture noise.

  If the noise is not removed by Fine-tuning alone, use the **Coarse** function to adjust the frequency as best as possible (**Coarse**) and Fine-tune again. After the noise has been reduced, re-adjust the picture so that it is aligned with the center of screen.

- **Position**

  To adjust the PC's screen position if it is not centered or does not fit the product screen.

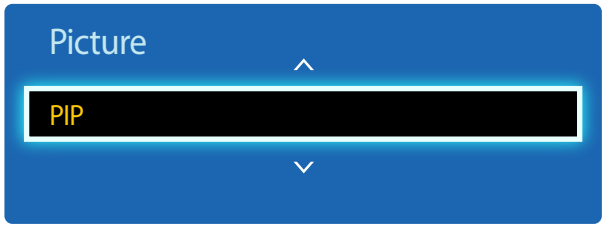
  Press the ▲ or ▼ button to adjust the Vertical Position. Press the ◀ or ▶ button to adjust the Horizontal Position.

- **Image Reset**

  Resets the image to the default settings.

PIP

MENU → System → PIP → ENTER



- The displayed image may differ depending on the model.
- For **PIP** sound, refer to the **Sound Select** instructions.
- If you turn the product off while watching in the **PIP** mode, the PIP function is reset to off. When you turn your product on, you must turn PIP on again to watch in the **PIP** mode.
- You may notice that the picture in the PIP screen becomes slightly unnatural when you use the main screen to view a game or karaoke.

PIP Settings

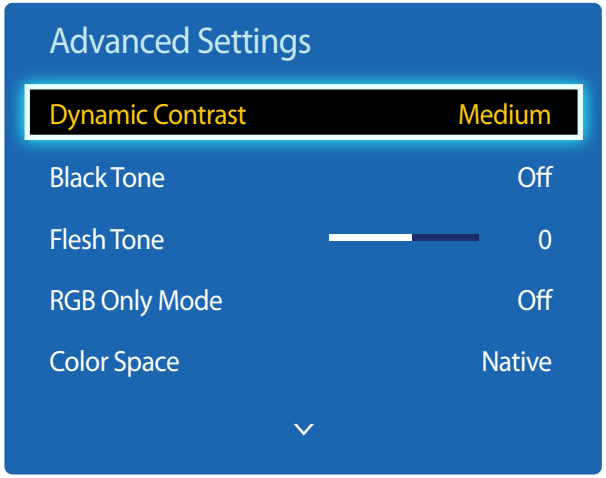
The picture from the external video source will be in the main screen and the picture from the product will be in the PIP sub-picture screen.

Main picture	Sub picture
AV	PC, DVI, HDMI
Component	DVI, HDMI
PC	AV, DVI, HDMI
DVI, HDMI	AV, PC, Component

- **PIP** (**Off** / **On**): Activate or deactivate the PIP function.
- **Source**: You can select a source of the sub picture.
- **Size** (, , , , ,): Select a size for the subpicture.
- **Position** (, , ,): Select a position for the sub-picture.
  - In (, ,) mode, you cannot select **Position**.
- **Sound Select** (**Main** / **Sub**): You can choose to listen to the sound from the **Main** picture or the **Sub** picture.

Advanced Settings

MENU → Picture → Advanced Settings → ENTER



– The displayed image may differ depending on the model.

Input Source	Picture Mode	Advanced Settings
PC, DVI, HDMI (when a PC is connected)	Information	White Balance / Gamma
	Advertisement	White Balance / Gamma
AV, Component, HDMI	Natural / Dynamic	Not available
AV, Component, HDMI	Standard	Dynamic Contrast / Black Tone / Flesh Tone / RGB Only Mode / Color Space / White Balance / Gamma / Motion Lighting
	Movie	Dynamic Contrast / Black Tone / Flesh Tone / RGB Only Mode / Color Space / White Balance / Gamma

Dynamic Contrast

Adjust the screen contrast.

- Off / Low / Medium / High

Black Tone

Select the black level to adjust the screen depth.

- Off / Dark / Darker / Darkest

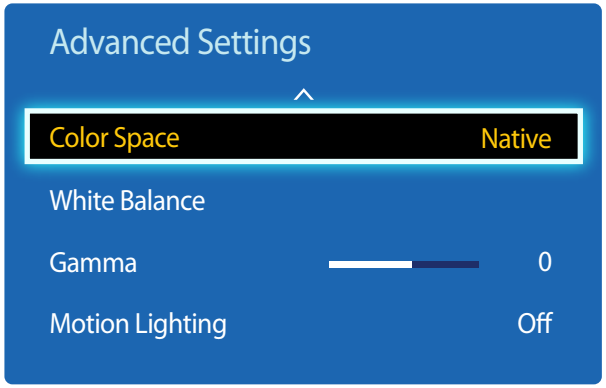
Flesh Tone

Emphasize pink Flesh Tone.

RGB Only Mode

Displays the Red, Green and Blue color for making fine adjustments to the hue and saturation.

- Off / Red / Green / Blue



– The displayed image may differ depending on the model.

Color Space

Adjusts the range and variety of colors (the color space) available to create images.

- **Auto** / **Native**

White Balance

Adjust the color temperature for a more natural picture.

- **R-Offset** / **G-Offset** / **B-Offset**: Adjust each color's (red, green, blue) darkness.
- **R-Gain** / **G-Gain** / **B-Gain**: Adjust each color's (red, green, blue) brightness.
- **Reset**: Resets the **White Balance** to its default settings.

Gamma

Adjust the primary color intensity.

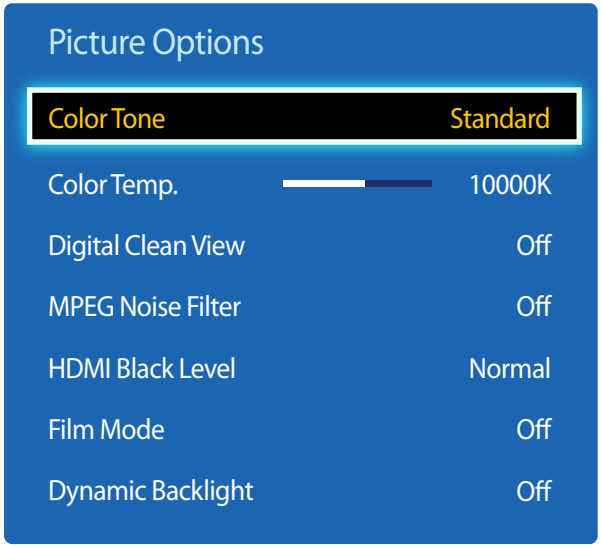
Motion Lighting

Reduces power consumption by reducing screen brightness when the picture on the screen is in motion.

- **Off** / **On**

Picture Options

MENU → Picture → Picture Options → ENTER

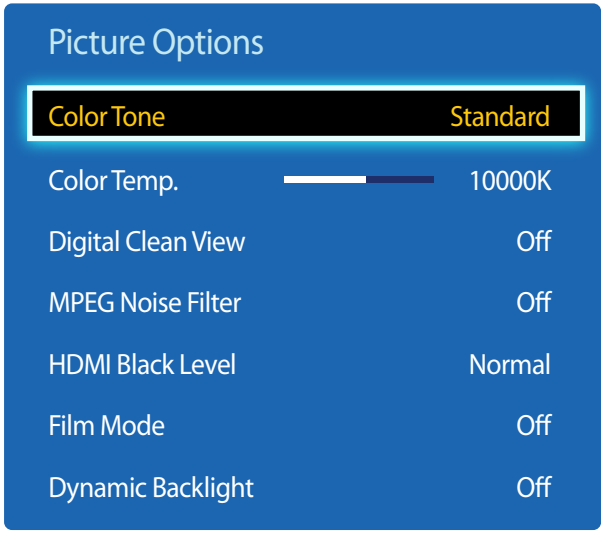


– The displayed image may differ depending on the model.

Select an option using the ▲ and ▼ arrow keys, and the press ↵.

Use the arrow keys to change the setting, and then press ↵.

Input source	Picture Mode	Picture Options
PC	Information	Color Tone / Color Temp. / Dynamic Backlight
	Advertisement	Color Tone / Color Temp. / Dynamic Backlight
DVI, HDMI(when a PC is connected)	Information	Color Tone / Color Temp. / HDMI Black Level / Dynamic Backlight
	Advertisement	Color Tone / Color Temp. / HDMI Black Level / Dynamic Backlight
AV, Component, HDMI	Dynamic / Standard / Natural / Movie	Color Tone / Color Temp. / Digital Clean View / MPEG Noise Filter / Film Mode / Dynamic Backlight



– The displayed image may differ depending on the model.

Color Tone

If the input source is **PC**, **DVI**, **HDMI**(PC connection).

- **Off** / **Cool** / **Standard** / **Warm**

If the input source is **AV**, **Component**, **HDMI**.

- **Off** / **Cool** / **Standard** / **Warm1** / **Warm2**

— **Warm1** or **Warm2** will be deactivated when the **Picture Mode** is **Dynamic**.

— Settings can be adjusted and stored for each external device connected to an input on the product.

Color Temp.

Adjust the color temperature (**Red**/**Green**/**Blue**). (Range: 3000K–15000K)

— This option is available when **Color Tone** is set to **Off**.

Digital Clean View

If the broadcast signal received by your product is weak, you can activate the **Digital Clean View** feature to reduce any static and ghosting that may appear on the screen.

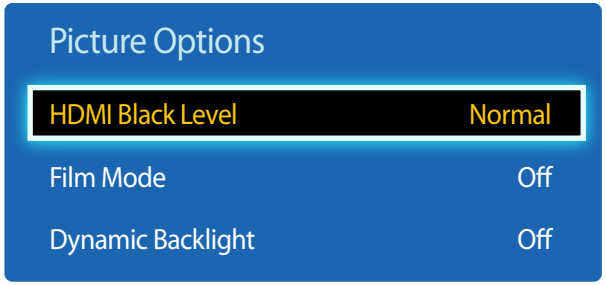
- **Off** / **Low** / **Medium** / **High** / **Auto**

— When the signal is weak, try all the options until the the product displays the best picture.

MPEG Noise Filter

Reduces MPEG noise to provide improved picture quality.

- **Off** / **Low** / **Medium** / **High** / **Auto**



– The displayed image may differ depending on the model.

HDMI Black Level

Selects the black level on the screen to adjust the screen depth.

- **Normal** / **Low**

— Available only in **HDMI** mode (AV Timing : 480p, 576p, 720p, 1080i, 1080p).

Film Mode

This mode is suitable to view movies.

Sets the product to automatically sense and process film signals from all sources and adjust the picture for optimum quality.

- **Off** / **Auto1** / **Auto2**

— Available in **HDMI**(1080i).

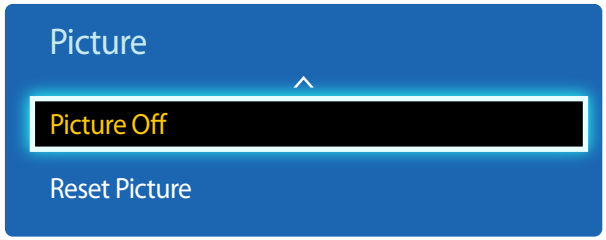
Dynamic Backlight

Automatically adjust the backlight to provide the best possible screen contrast under the current conditions.

- **Off** / **On**

— The **Dynamic Backlight** is not available when the input source is set to **PC** while **Video Wall** is **On**.

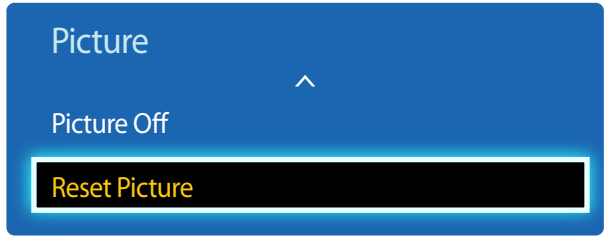
Picture Off



– The displayed image may differ depending on the model.

The product screen is turned off but the audio will continue. Press any key on your remote to turn the screen back on.

Reset Picture



– The displayed image may differ depending on the model.

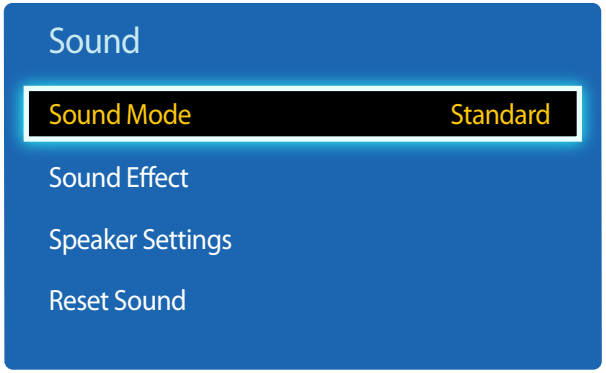
Resets your current picture mode to its default settings.

Chapter 06
Sound Adjustment

Configure the sound (**Sound**) settings for the product.

Sound Mode

MENU → **Sound** → **Sound Mode** → ENTER



– The displayed image may differ depending on the model.

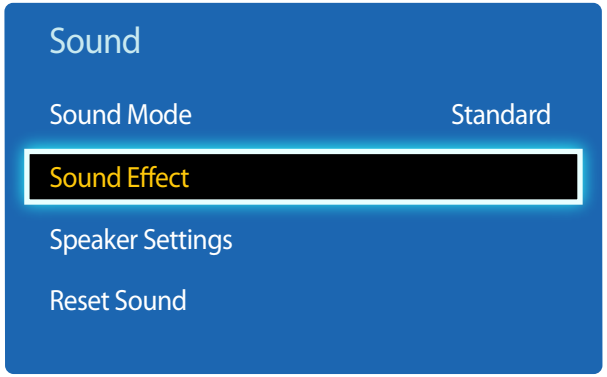
You can select a sound mode to suit your personal preferences.

- **Standard**: Selects the normal sound mode.
- **Music**: Emphasizes music over voices.
- **Movie**: Provides the best sound for movies.
- **Clear Voice**: Emphasizes voices over other sounds.
- **Amplify**: Increase the intensity of high-frequency sound to allow a better listening experience for the hearing impaired.

— If **Speaker Select** is set to **External**, **Sound Mode** is disabled.

Sound Effect

MENU → Sound → Sound Effect → ENTER



– The displayed image may differ depending on the model.

Configure your preferred sound effect for output sound.

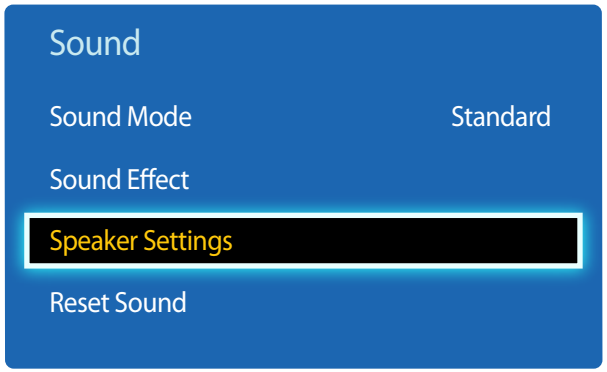
— If **Speaker Select** is set to **External**, **Sound Effect** is disabled.

— Available only when **Sound Mode** is set to **Standard**.

- **DTS TruSurround** (**Off** / **On**)
  This function provides a virtual 5.1 channel surround sound experience through a pair of speakers using HRTF(Head Related Transfer Function) technology.
- **DTS TruDialog** (**Off** / **On**)
  This function allows you to increase the intensity of a voice over background music or sound effects so that dialog can be heard more clearly.
- **Equalizer**
  Use **Equalizer** to customize sound setting for each speaker.
  – **Balance(L/R)**: Adjusts the balance between the right and left speaker.
  – **100Hz** / **300Hz** / **1kHz** / **3kHz** / **10kHz** (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.
  – **Reset**: Resets the equalizer to its default settings.

Speaker Settings

MENU → Sound → Speaker Settings → ENTER

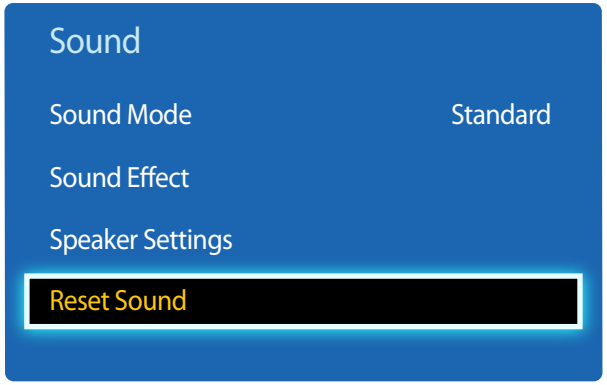


– The displayed image may differ depending on the model.

- **Speaker Select** (**External** / **Internal** / **Receiver**)
  If you are listening to the sound track of a broadcast or movie through an external receiver, you may hear a sound echo caused by the difference in decoding speed between the products speakers and the speakers attached to your audio receiver. If this occurs, set the product to **External**.
  — When you set **Speaker Select** to **External**, the products speakers are turned off.
  You will hear sound through the external speakers only. When the **Speaker Select** is set to **Internal**, both the product speakers and the external speakers are on. You will hear sound through both.
  — If there is no video signal, both the products speakers and the external speakers will be mute.

Reset Sound

MENU → Sound → Reset Sound → ENTER



– The displayed image may differ depending on the model.

Reset all sound settings to the factory defaults.

Chapter 07
Applications

Source List

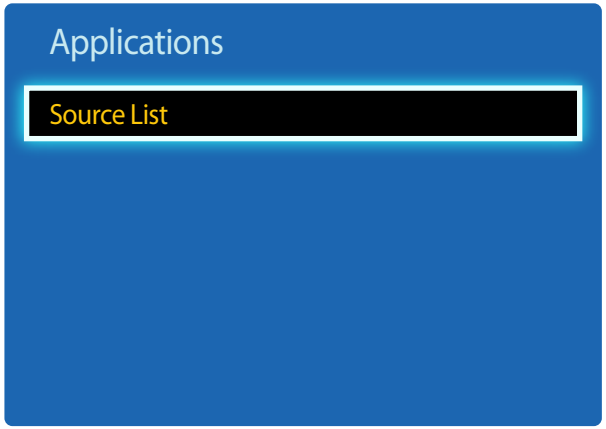
Source allows you to select a variety of sources and change source device names.

You can display the screen of a source device connected to the product. Select a source from Source List to display the screen of the selected source.

— The input source can also be changed by using the **SOURCE** button on the remote control.

— The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

MENU → **Applications** → **Source List** → **ENTER**



– The displayed image may differ depending on the model.

Refresh

MENU → **Applications** → **Source List** → **TOOLS** → **Refresh** → **ENTER**

If you cannot find a device you want, select **Refresh** to refresh the list.

Edit Name

MENU → **Applications** → **Source List** → **TOOLS** → **Edit Name** → **ENTER**

Sometimes the screen will not display properly unless the name of a source device is specified in **Edit Name**.

In addition, it is best to rename the source device in **Edit Name** to obtain optimal picture quality.

— The list can include the following source devices. **Source** devices on the list differ depending on the selected source.
VCR / **DVD** / **Cable STB** / **Satellite STB** / **PVR STB** / **AV Receiver** / **Game** / **Camcorder** / **PC** / **DVI PC**/ **DVI Devices** / **TV** / **IPTV** / **Blu-ray** / **HD DVD** / **DMA**

— Available settings in the **Picture** menu depend on the current source and settings made in **Edit Name**.

- When connecting a PC to the **HDMI IN** port with HDMI cable, you should set the product to **PC** mode under **Edit Name**.
- When connecting a PC to the **HDMI IN** port with HDMI to DVI cable, you should set the product to **DVI PC** mode under **Edit Name**.
- When connecting an AV devices to the **HDMI IN** port with HDMI to DVI cable, you should set the product to **DVI Devices** mode under **Edit Name**.

Information

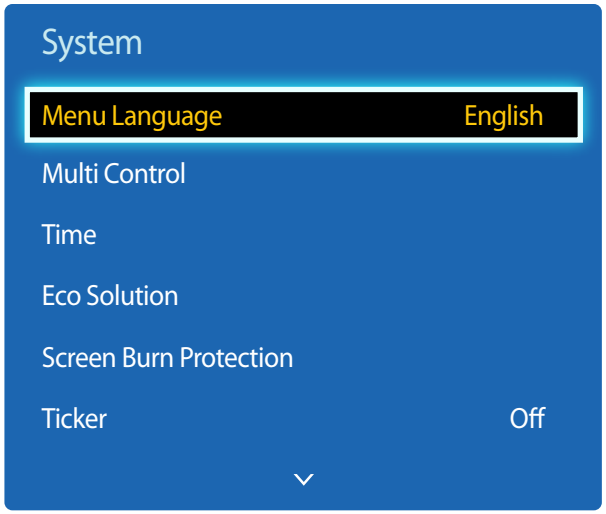
MENU → **Applications** → **Source List** → **TOOLS** → **Information** → **ENTER**

You can see detailed information about the selected external device.

Chapter 08
System

Menu Language

MENU → System → Menu Language → ENTER



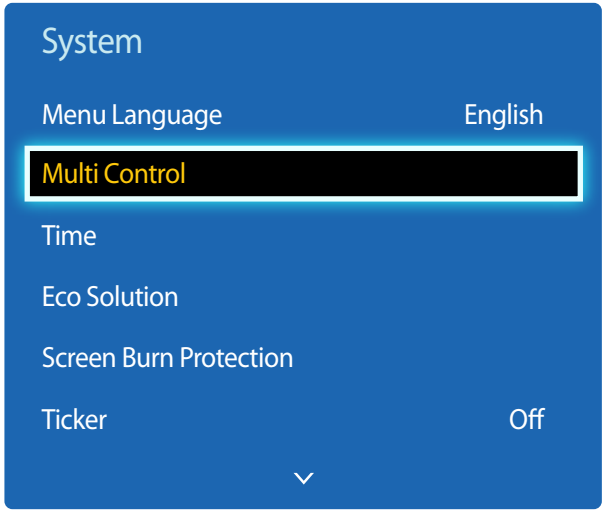
– The displayed image may differ depending on the model.

Set the menu language.

— A change to the language setting will only be applied to the onscreen menu display. It will not be applied to other functions on your PC.

Multi Control

MENU → System → Multi Control → ENTER



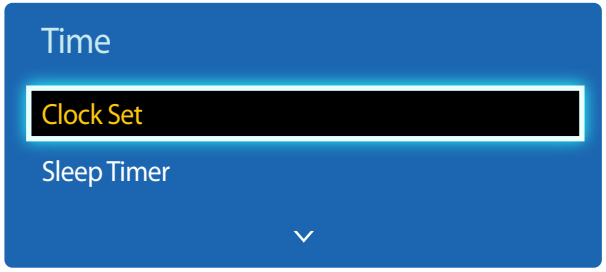
– The displayed image may differ depending on the model.

Configuring settings for Multi Control

- **ID Setup**
  Assign an ID to a set. (Range: 0~99)
  Press ▲ or ▼ to select a number, and press ↵.
- **ID Input**
  Enter the ID number of the product connected to the input cable for input signal reception.
  Enter the number you want using the number buttons on the remote control.

Time

MENU → System → Time → ENTER



– The displayed image may differ depending on the model.

You can configure **Clock Set** or **Sleep Timer**. You can also set the product to automatically turn on or off at a specified time using the **Timer** function.

Clock Set

Set the clock to use the various various timer features of the product.

- **Clock Set**

  Set the **Date** and **Time**.

  Select **Clock Set**. Select **Date** or **Time**, and then press .

  Use the number buttons to enter numbers or press the up and down arrow buttons. Use the left and right arrow buttons to move from one entry field to the next. Press when done.

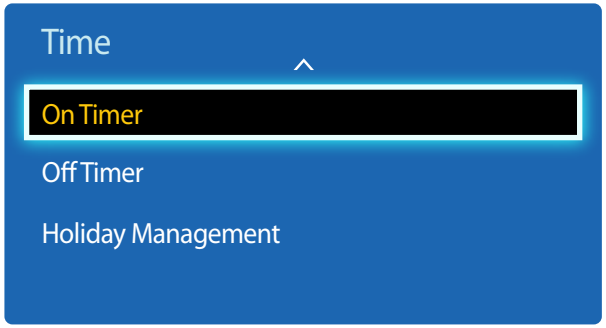
— You can set the **Date** and **Time** directly by pressing the number buttons on the remote control.

Sleep Timer

Automatically shuts off the product after a preset period of time.

(**Off** / **30 min.** / **60 min.** / **90 min.** / **120 min.** / **150 min.** / **180 min.**)

— Use the up and down arrows to select a period of time, and then press . To cancel **Sleep Timer**, select **Off**.



– The displayed image may differ depending on the model.

On Timer

Set **On Timer** so that your product turns on automatically at a time and on a day of your choosing.

The power is turned on with the specified volume or input source.

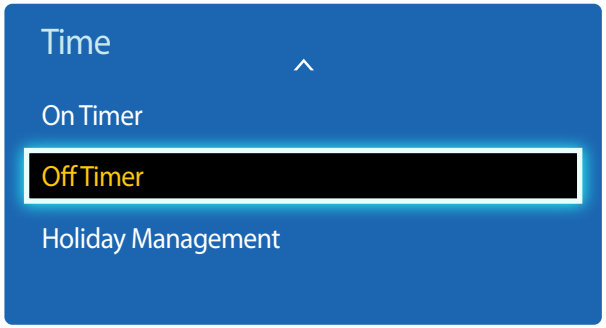
On Timer: Set the on timer by making a selection from one of the seven options. Ensure you set the current time first.

(**On Timer1** ~ **On Timer7**)

— You must set the clock before you can use **On Timer**.

- **Setup**: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**. If you select **Manual**, you can choose the days you want **On Timer** to turn on your product.

  — The check mark indicates days you've selected.
- **Time**: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
- **Volume**: Set the desired volume level. Use the left and right arrow buttons to change the volume level.
- **Source**: Select the input source of your choice.



– The displayed image may differ depending on the model.

Off Timer

Set the off timer (**Off Timer**) by making a selection from one of the seven options. (**Off Timer1** ~ **Off Timer7**)

— You must set the clock before you can use **Off Timer**.

- **Setup**: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**. If you select **Manual**, you can choose the days you want **Off Timer** to turn off your product.

  — The check mark indicates days you've selected.

- **Time**: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.

Holiday Management

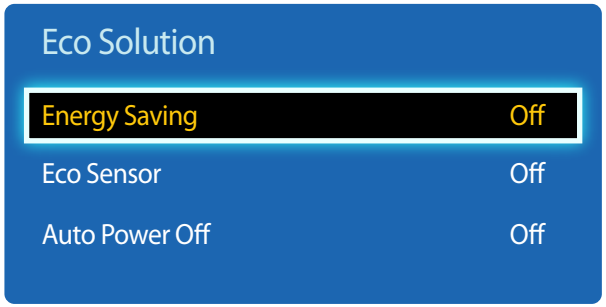
Timer will be disabled during a period specified as a holiday.

- **Add**: Specify the period you want to add as a holiday.
  Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the **Save** button.
  The period will be added to the list of holidays.
  - **Start**: Set the start date of the holiday.
  - **End**: Set the end date of the holiday.
  - **Delete**: Delete all items from the list of holidays.
    Select **Delete**. The message "**Delete all holidays?**" will appear.
    Select **Yes**. All holidays will be deleted.

- **Apply**: Set the **On Timer** and **Off Timer** to not activate on public holidays.
  - Press ↵ to select the **On Timer** and **Off Timer** settings you do not want to activate.
  - The selected **On Timer** and **Off Timer** will not activate.

Eco Solution

MENU → System → Eco Solution → ENTER



– The displayed image may differ depending on the model.

Energy Saving

Reduce the power consumption by adjusting the screen brightness.

- **Off** / **Low** / **Medium** / **High**

Eco Sensor

To enhance your power savings, the picture settings will automatically adapt to the light in the room.

- **Off** / **On**

— Adjusting the **Backlight** setting under **Picture** while **Eco Sensor** is on will disable the **Off**.

- **Min. Backlight**: When **Eco Sensor** is **On**, you can manually adjust the minimum screen brightness.

  — If **Eco Sensor** is **On**, the display brightness may change (become slightly darker or brighter) depending on the surrounding light intensity. You can control the screen's minimum brightness with the **Min. Backlight** function.

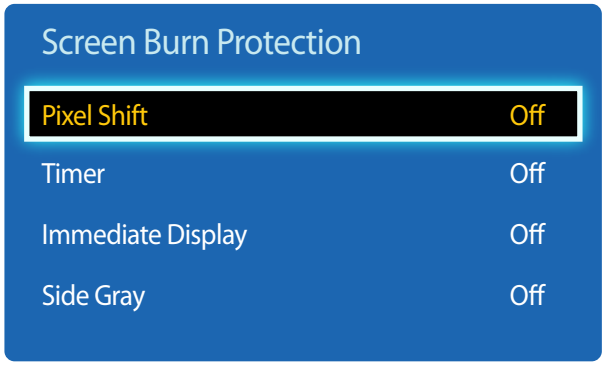
Auto Power Off

The product will automatically turn off if you don't press a button on the remote or touch a button on product front panel within 4 hours to prevent overheating.

- **Off** / **On**

Screen Burn Protection

MENU → System → Screen Burn Protection → ENTER



– The displayed image may differ depending on the model.

To reduce the possibility of screen burn, this unit is equipped with **Pixel Shift** screen burn prevention technology.

Pixel Shift moves the picture slightly on the screen.

The **Pixel Shift Time** setting allows you to program the time between movements of the picture in minutes.

Pixel Shift

Minimize image retention by finely moving pixels horizontally or vertically.

- **Horizontal**: Sets how many pixels the screen moves horizontally.
- **Vertcal**: Sets how many pixels the screen moves vertically.
- **Time**: Set the time interval for performing the horizontal or vertical movement, respectively.

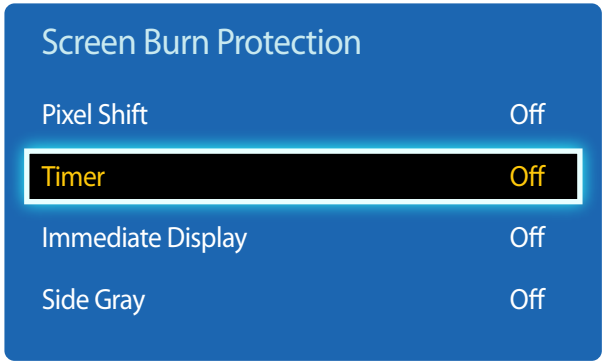
Available Pixel Shift Settings and Optimum Settings.

	Available Settings	Optimum Settings
Horizontal (pixels)	0~4	4
Vertcal (pixels)	0~4	4
Time (minute)	1 min.~4 min.	4 min.

— The **Pixel Shift** value may differ depending on the product size (inches) and mode.

— Displaying a still image or a **4:3** output for an extended period of time may cause image retention. This is not a defect in the product.

— This function is not available in the **Screen Fit** mode.



– The displayed image may differ depending on the model.

Timer

You can set the timer for **Screen Burn Protection**.

The **Pixel Shift** feature stops automatically after a specified period of time.

- **Off**
- **Repeat**: Display the image retention-preventive pattern set in **Mode** at specified time intervals(**Period**).

  — **Period** and **Time** can be configured when **Repeat** is selected.
- **Interval**: Display the image retention-preventive pattern set in **Mode** for a specified period of time (from **Start Time** to **End Time**).

  — The option is enabled only when **Clock Set** is configured.
- **Mode**: Select a screen protective pattern to display.
  - **Pixel**: Pixels on the screen alternate black continuously.
  - **Rolling Bar**: A vertical bar moves left to right.
  - **Fading Screen**: The entire screen becomes brighter, then darker.

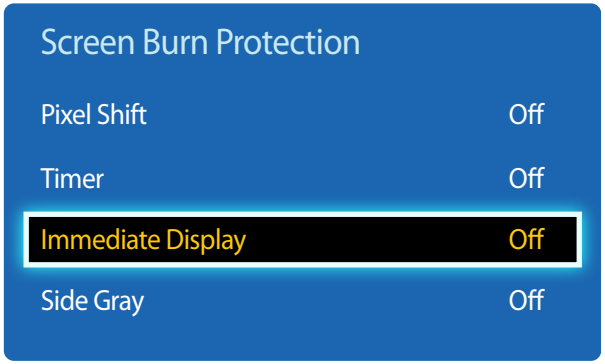
  — The **Rolling Bar** and **Fading Screen** patterns appear only once regardless of the specified repeat period or time.
- **Period**: Specify the time interval to activate the **Screen Burn Protection** function.
  - **Hour 1** ~ **Hour 10**

  — The option is enabled when **Repeat** is selected for **Timer**.
- **Time**: Specify the duration to keep the **Screen Burn Protection** function on.
  - **10 sec** ~ **50 sec**

  — The option is enabled when **Pixel** is selected for **Mode**.
- **Start Time**: Set the start time to activate the screen protection function.

  — The option is enabled when **Interval** is selected for **Timer**.
- **End Time**: Set the end time to deactivate the screen protection function.

  — The option is enabled when **Interval** is selected for **Timer**.



– The displayed image may differ depending on the model.

Immediate Display

Select the screen saver you want to display immediately.

- **Off** / **Pixel** / **Rolling Bar** / **Fading Screen**

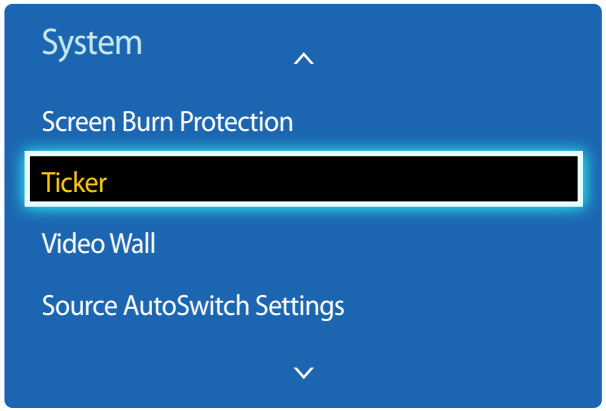
Side Gray

When the screen is set to **4:3** aspect ratio, adjust the brightness of white margins on sides to protect the screen.

- **Off** / **Light** / **Dark**

Ticker

MENU → System → Ticker → ENTER



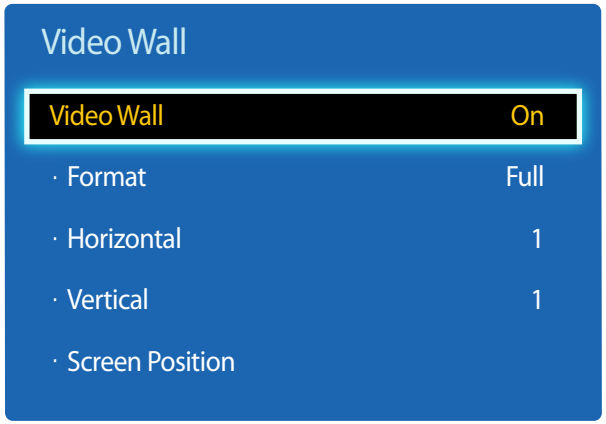
- The displayed image may differ depending on the model.
- The **Ticker** function is only available when **Menu Language** is set to **English**.

Input text while a video or image is displayed and display the text on the screen.

- **Off** / **On**
  - **Message**, **Time**, **Position**, **Motion**, and **Font Style** are enabled only when **Ticker** is set to **On**.
- **Message**: Enter a message to display on the screen.
- **Time**: Set the **Start Time** and **End Time** to display a **Message**.
- **Position**: Select an orientation to display a **Message** from **Horizontal** and **Vertical**.
  - **Horizontal** (**Left** / **Center** / **Right**)
  - **Vertical** (**Up** / **Middle** / **Down**)
- **Motion**: Specify the **Direction** and **Speed** to display a **Message**.
  - **Motion** (**Off** / **On**)
  - **Direction** (**Left** / **Right** / **Up** / **Down**)
  - **Speed** (**Slow** / **Normal** / **Fast**)
  - **Direction** and **Speed** are enabled only when **Motion** is set to **On**.
- **Font Style**: Specify the message **Size** and **Font Color**.

Video Wall

MENU → System → Video Wall → ENTER



- The displayed image may differ depending on the model.
- Some models may not support the MagicInfo function.
- The **Video Wall** option is only enabled when **PIP** is set to **Off**.
- If more than four displays are connected horizontally and vertically, it is recommended that you use an input resolution of XGA (1024 x 768) level or higher to prevent a dark picture due to degradation in the contrast or color intensity.

Customize the layout of multiple displays that are connected to form a video wall.

In addition, display part of a whole picture or repeat the same picture on each of the connected multiple displays.

Video Wall

You can activate or deactivate **Video Wall**.

To organize a video wall, select **On**.

Format

Select a format to display images on multiple displays.

- **Full**: Display images in full screen.
- **Natural**: Display images at the original resolution without enlarging or reducing.

— The **Format** option is only enabled when **Video Wall** is set to **On**.

Horizontal

This function automatically divides the screen according to the specified number of horizontal displays.

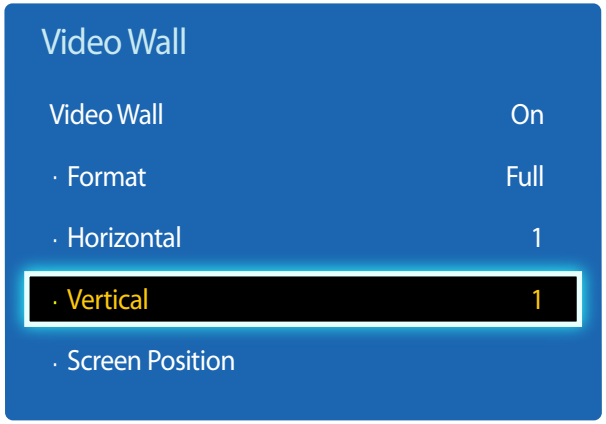
Enter the number of horizontally arranged displays.

The horizontal screen will automatically be divided according to the number entered.

A maximum of 15 displays can be assigned to the horizontal arrangement.

— The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.

— The **Horizontal** option is only enabled when **Video Wall** is set to **On**.



– The displayed image may differ depending on the model.

Vertical

This function automatically divides the screen according to the specified number of vertical displays.

Enter the number of vertically arranged displays.

The vertical screen will automatically be divided according to the number entered.

A maximum of 15 displays can be assigned to the vertical arrangement.

— The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.

— The **Vertical** option is only enabled when **Video Wall** is set to **On**.

Screen Position

You can customize the arrangement of split screens by moving displays identified with a number using the **Screen Position** function.

Select **Screen Position** to display the arrangement of displays (identified with a number) specified according to the **Horizontal** or **Vertical** settings. To customize the arrangement, move a number (display) using the direction buttons on the remote control and press ↵.

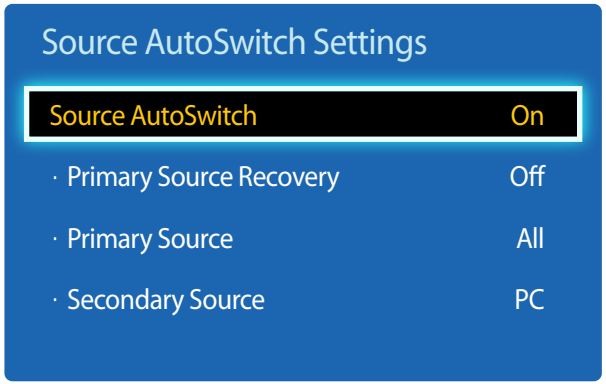
— A maximum of 100 displays can be arranged in **Screen Position**.

— The **Screen Position** option is only enabled when **Video Wall** is set to **On**.

— The **Screen Position** window is only displayed when **Horizontal** and **Vertical** are configured.

Source AutoSwitch Settings

MENU → System → Source AutoSwitch Settings → ENTER



– The displayed image may differ depending on the model.

Turning on the display with **Source AutoSwitch On**, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.

Source AutoSwitch

When the **Source AutoSwitch** is **On**, the display video source will automatically be searched for active video.

The **Primary Source** selection will be activated, if the current video source is not recognized.

Secondary Source selection will become active, if no primary video source is available.

If both the primary and secondary input sources are not recognized, the display will perform two searches for an active source, each search checking the primary and then secondary source. If both searches fail, the display will return to the first video source and display a message indicating that there is no signal.

When the **Primary Source** selection is set to **All**, the display will search all the video source inputs twice in sequence looking for an active video source, returning back to the first video source in the sequence if no video is found.

Primary Source Recovery

Select whether to restore the selected primary input source when a primary input source is connected.

— The **Primary Source Recovery** function is disabled if **Primary Source** is set to **All**.

Primary Source

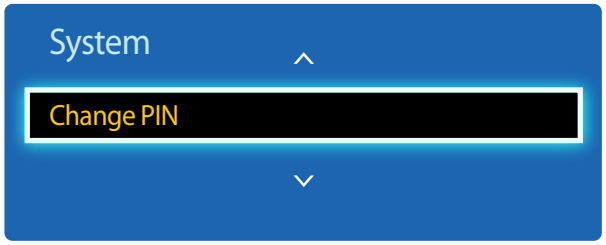
Specify **Primary Source** for the automatic input source.

Secondary Source

Specify **Secondary Source** for the automatic input source.

Change PIN

MENU → System → Change PIN → ENTER



– The displayed image may differ depending on the model.

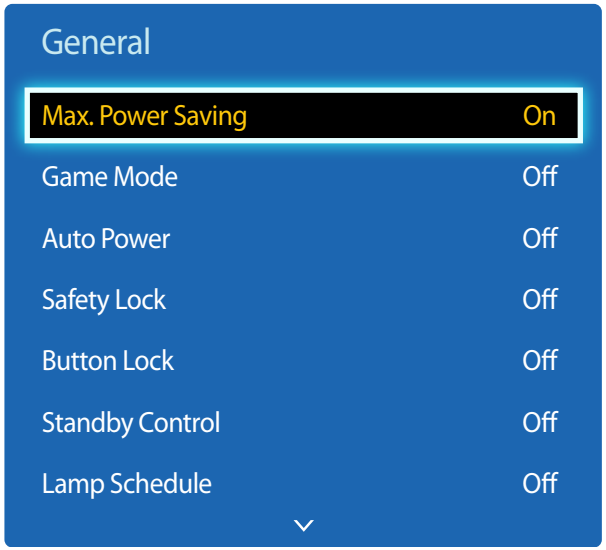
The **Change PIN** screen will appear.

Choose any 4 digits for your PIN and enter it in **Enter New PIN**. Reenter the same 4 digits in **Confirm New PIN**.

When the Confirm screen disappears, press the **Close** button. The product has memorized your new PIN.

General

MENU → System → General → ENTER



– The displayed image may differ depending on the model.

Max. Power Saving

Turns off the product to reduce power consumption after the PC has been left idle for a specified period of time.

- **Off** / **On**

— Available only **PC**, **DVI**, **HDMI** mode.

Game Mode

When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting game mode.

- **Off** / **On**

— Precautions and limitations for **Game Mode**

To disconnect the game console and connect another external device, set **Game Mode** to **Off** in the setup menu.

— **Game Mode** is not available when the input source is set to **PC**.

— If **Game Mode** is **On**. **Picture Mode** is set to **Standard** and **Sound Mode** is set to **Movie**.

Auto Power

Enabling this option will automatically power on the product if the power cable is connected.

- **Off** / **On**

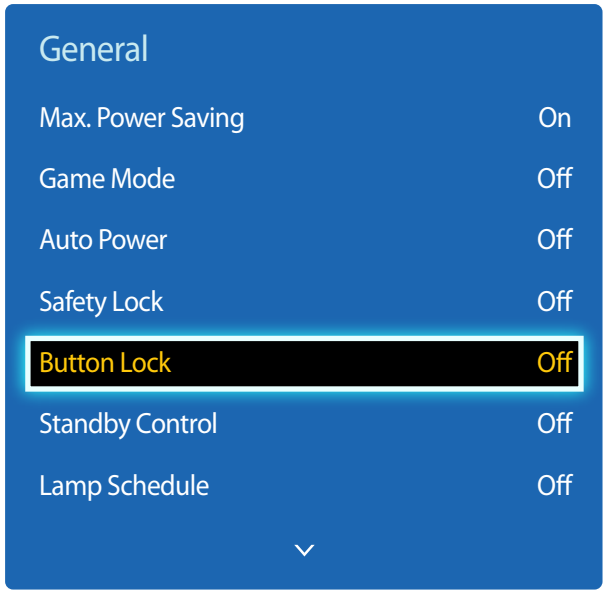
Safety Lock

It sets safe lock function.

- **Off** / **On**

All the menus and buttons of the product and remote control, except for the **LOCK** button on the remote control, will be locked by the **Safety Lock** function.

To unlock the menus and buttons, press the **LOCK** button and then enter the password (default password: 0 - 0 - 0 - 0).



– The displayed image may differ depending on the model.

Button Lock

This menu can be used to lock the buttons on the product.

Only the remote control can control the product if **Button Lock** is set to **On**.

- **Off** / **On**

Standby Control

You can set the screen standby mode to be applied when an input signal is received.

- **Auto**
  Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.
  The message **No Signal** will appear if no source device is connected.
- **On**
  Power-saving mode will activate if no input signals are detected.
- **Off**
  The message **No Signal** will appear if no input signals are detected.

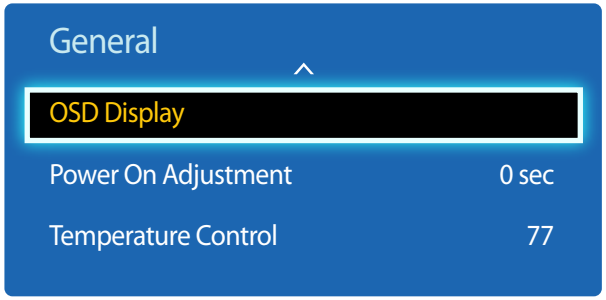
— The **Standby Control** option is only enabled when **Source List** is set to **PC**, **DVI**, **HDMI**.

— If **No Signal** is displayed although a source device is connected, check the cable connection.

Lamp Schedule

Enables the lamp value to be adjusted to a user-specified value at a specified time in MDC mode.

- **Off** / **On**



– The displayed image may differ depending on the model.

OSD Display

Displays or hides a menu item on the screen.

— **Source OSD** / **No Signal OSD** / **MDC OSD**

Power On Adjustment

You can set the warm-up time for the screen to turn on after the power button is pressed. (Range: 0 – 50 seconds)

— A warm-up time that is too short may damage the product due to overvoltage.

Temperature Control

This function detects the internal temperature of the product. You can specify the temperature range that is acceptable.

The default temperature is set to 77°C.

The recommended operating temperature for this product is 75 to 80°C (based on an ambient temperature of 40°C).

— The screen will become darker if the current temperature exceeds the specified temperature limit. If the temperature continues to rise, the product will power off to prevent overheating.

Anynet+ (HDMI-CEC)

MENU → System → Anynet+ (HDMI-CEC) → ENTER

- The displayed image may differ depending on the model.
- The **Anynet+ (HDMI-CEC)** functions do not operate with other manufacturers' products.
- For instructions explaining how to connect Anynet+ external devices, refer to the device's user manual.
- You can connect only one receiver (home theater).

Anynet+ (HDMI-CEC)

Anynet+ is a function that enables you to control all connected Samsung devices that support Anynet+ with your Samsung product remote. The Anynet+ system can be used only with Samsung devices that have the Anynet+ feature. To be sure your Samsung device has this feature, check if there is an Anynet+ logo on it.

— You can only control **Anynet+** devices using the product remote control, not the buttons on the product.

— The product remote control may not work under certain conditions. If this occurs, reselect the **Anynet+** device.

— **Anynet+** works when the AV device supporting **Anynet+** is in the standby or on status.

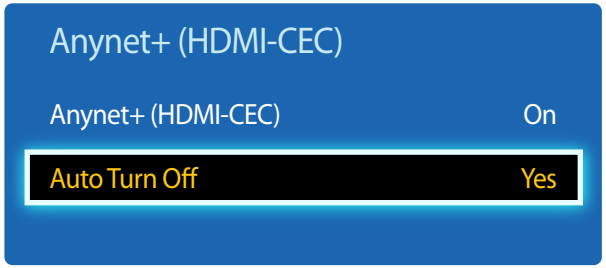
— While in **PIP** mode, **Anynet+** functions only when an AV device is connected as the primary display. It does not work if the AV device is connected as a secondary display.

— **Anynet+** supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.

Anynet+ Menu

The **Anynet+** menu changes depending on the type and status of the Anynet+ devices connected to the product.

Anynet+ Menu	Description
View PC	Changes **Anynet+** mode to **PC** mode.
Device List	Shows the Anynet+ device list.
(device_name) MENU	Shows the menu of the connected device menus. E.g. if a DVD player is connected, the disc menu of the DVD player will appear.
(device_name) Tools	Shows the tools menu of the connected device. E.g. if a DVD player is connected, the tools menu of the DVD player will appear. — Depending on the device, this menu may not be available.
(device_name) Title Menu	Shows the title menu of the disc in the connected device. E.g. If a DVD player is connected, the title menu of the movie in the DVD player will appear. — Depending on the device, this menu may not be available.



– The displayed image may differ depending on the model.

Auto Turn Off

Setting an **Anynet+** Device to turn **Off** automatically when the product is turned off.

- **No** / **Yes**

— If **Auto Turn Off** is set to **Yes**, running external devices will turn off at the same time as the product powers off.

— May not be enabled depending on the device.

Switching between Anynet+ Devices

1 Press the **TOOLS** button, select **Anynet+ (HDMI-CEC)**, and then press ↵.

2 Select **Device List**, and then press the ↵ button.

If you cannot find a device you want, select **Refresh** to refresh the list.

3 Select a device, and then press the ↵ button. You can switch to the selected device.

— The **Device List** menu appears only when you set **Anynet+ (HDMI-CEC)** to **On** in the **System** menu.

— Switching to the selected device may take up to 2 minutes. You cannot cancel the switching operation while switching is in progress.

— If you have selected an Anynet+ device by pressing the **SOURCE** button and then selecting its input source, you cannot use the Anynet+ function.

— Make sure to switch to an **Anynet+** device by using the **Device List**.

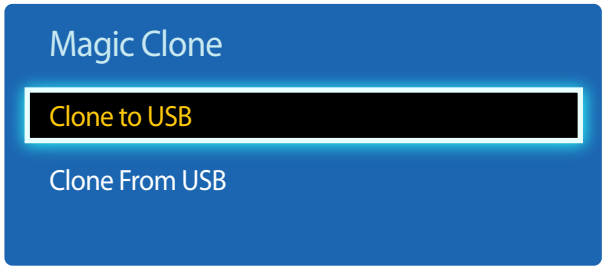
Troubleshooting for Anynet+

Problem	Possible Solution
Anynet+ does not work.	• Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only. • You can connect only one receiver (home theater). • Check if the Anynet+ device power cord is properly connected. • Check the Anynet+ device's Video/Audio/HDMI cable connections. • Check whether **Anynet+ (HDMI-CEC)** is set to **On** in the Anynet+setup menu. • Check whether the remote control is Anynet+ compatible. • Anynet+ doesn't work in certain situations. (initial setup) • If you have removed and then reconnected the HDMI cable, please make sure to search devices again or turn your product off and on again. • Check if the Anynet+ function of the Anynet device is set on.
I want to start Anynet+.	• Check if the Anynet+ device is properly connected to the product and check if the **Anynet+ (HDMI-CEC)** is set to **On** in the **Anynet+ System** menu. • Press the **TOOLS** button to display the **Anynet+** menu and select a menu you want.
I want to exit Anynet+.	• Select **View PC** in the **Anynet+** menu. • Press the **SOURCE** button on the product remote control and select a non- Anynet+ device.
The message "Connecting to Anynet+ device ..." appears on the screen.	• You cannot use the remote control when you are configuring Anynet+ or switching to a view mode. • Use the remote control after the product has completed Anynet+ configuration or has finished switching to Anynet+.
The Anynet+ device does not play.	• You cannot use the play function when initial setup is in progress.

Problem	Possible Solution
The connected device is not displayed.	• Check whether or not the device supports Anynet+ functions. • Check whether or not the HDMI cable is properly connected. • Check whether **Anynet+ (HDMI-CEC)** is set to **On** in the **Anynet+ System** menu. • Search Anynet+ devices again. • Anynet+ requires an HDMI connection. Make sure the device is connected to your product with an HDMI cable. • Some HDMI cables may not support Anynet+ functions. • If the connection is terminated because there has been a power failure or the HDMI cable has been disconnected, please repeat the device scan.

Magic Clone

MENU → System → Magic Clone → ENTER



– The displayed image may differ depending on the model.

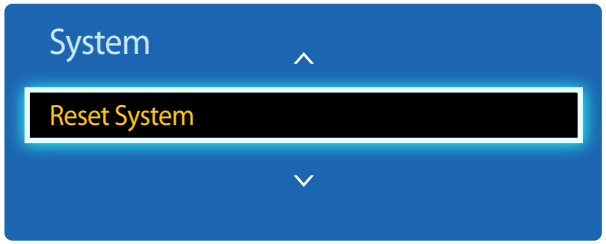
Export the product settings to a USB device or load the settings via a USB device.

This option is useful when assigning the same settings to several products.

- **Clone to USB**: Copy the product settings to a USB device.
- **Clone From USB**: Assign the settings saved in a USB device to the product.
  – After configuration is complete, the product is rebooted automatically.
  — The option may not work properly if the USB device contains a file other than a settings file.
  — Confirm that the USB device functions properly before running the option.
  — The option is available for products with the same **Model Code** and **Software Version**.
  Go to **Support** → **Contact Samsung** and find the product **Model Code** and **Software Version**.

Reset System

MENU → System → Reset System → ENTER

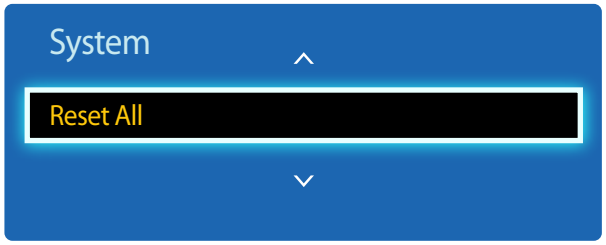


– The displayed image may differ depending on the model.

This option returns the current settings under system to the default factory settings.

Reset All

MENU → System → Reset All → ENTER



– The displayed image may differ depending on the model.

This option returns all the current settings for a display to the default factory settings.

Chapter 09
Support

Software Update

MENU → Support → Software Update → ENTER

The **Software Update** menu lets you upgrade your product software to the latest version.

— Be careful not to turn off the power until the upgrade is complete. The product will turn off and on automatically after completing the software upgrade.

— When you upgrade software, all video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.

By USB

To perform a software update from a USB device, contact the customer service center.

Contact Samsung

MENU → Support → Contact Samsung → ENTER

View this information when your product does not work properly or when you want to upgrade the software.

You can find information regarding our call centers and how to download products and software.

— **Contact Samsung** and find the product **Model Code** and **Software Version**.

Chapter 10
Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Center

Before calling Samsung Customer Service Center, test your product as follows. If the problem persists, contact Samsung Customer Service Center.

Testing the Product

Check if your product is operating normally by using the product test function.

If the screen remains blank while the power LED blinks even when the product is correctly connected to a PC, perform product testing.

1 Power off both the PC and product.

2 Disconnect all the cables from the product.

If the screen remains blank, check the PC system, video controller and cable.

3 Power on the product.

4 If **No Signal** is displayed, the product is operating normally.

Checking the Resolution and Frequency

Not Optimum Mode will briefly be displayed if a mode that exceeds a supported resolution is selected (refer to Supported Resolutions).

Check the followings.

Installation issue (PC mode)

The screen keeps switching on and off.	Check the cable connection between the product and PC, and ensure the connection is secure.
Blank spaces are found on all four sides of the screen when an HDMI or HDMI-DVI cable is connected to the product and PC.	The blank spaces found on the screen have nothing to do with the product. Blank spaces on the screen are caused by the PC or graphics card. To resolve the problem, adjust the screen size in the HDMI or DVI settings for the graphics card. If the graphics card settings menu does not have an option to adjust the screen size, update the graphics card driver to the latest version. (Please contact the graphics card or computer manufacturer for further details about how to adjust the screen settings.)
PC is shown in Source when a PC is not connected.	PC is always shown in Source irrespective of whether or not a PC is connected.

Screen issue

The power LED is off. The screen will not switch on.	Make sure that the power cord is connected.
No Signal is displayed on the screen (refer to "Connecting to a PC").	Check that the product is connected correctly with a cable
	Check that the device connected to the product is powered on.
Not Optimum Mode is displayed.	This message is displayed when a signal from the graphics card exceeds the product's maximum resolution and frequency.
	Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to the product specifications.
The images on the screen look distorted.	Check the cable connection to the product

Screen issue

The screen is not clear. The screen is blurry.	Adjust **Coarse** and **Fine**.
	Remove any accessories (video extension cable, etc) and try again.
	Set the resolution and frequency to the recommended level.
The screen appears unstable and shaky.	Check that the resolution and frequency of the PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table.
There are shadows or ghost images left on the screen.	
The screen is too bright. The screen is too dark.	Adjust **Brightness** and **Contrast**.
Screen color is inconsistent.	Go to **Picture** and adjust the **Color Space** settings.
White does not really look white.	Go to **Picture** and adjust the **White Balance** settings.
There is no image on the screen and the power LED blinks every 0.5 to 1 second.	The product is in power-saving mode.
	Press any key on the keyboard or move the mouse to return to the previous screen.
The product will turn off automatically.	Go to **System** and make sure **Sleep Timer** is set to **Off**.
	If a PC is connected to the product, check the power status of the PC.
	Make sure the power cable is connected properly to the product and power outlet.
	If the signal from a connected device is not detected, the product automatically turns off after 10 to 15 minutes.
Picture quality of the product is different from the dealer shop where it was purchased.	Use an HDMI cable to obtain high-definition (HD) picture quality.

Screen issue

The screen display does not look normal.	Encoded video content may cause the display to appear corrupted in scenes featuring fast moving objects such as in a sports event or action video.
	Low signal level or low picture quality may cause the display to appear corrupted. This does not mean the product is defective.
	A cell phone within a distance of one-meter radius may cause static on analog and digital products.
The brightness and color do not look normal.	Go to **Picture** and adjust the screen settings such as **Picture Mode**, **Color**, **Brightness** and **Sharpness**. — Refer to page 46 for details about the **Picture** menu.
	Go to **System** and adjust the **Energy Saving** settings. — Refer to page 69 for details about the **System** menu.
	Reset the screen settings to the default settings. — Refer to page 59 for details about the **Reset Picture** menu.
Broken lines are displayed on the edges of the screen.	If **Picture Size** is set to **Screen Fit**, change the setting to **16:9**.
Lines (red, green or blue) are displayed on the screen.	These lines are displayed when there is a defect in DATA SOURCE DRIVER IC on the monitor. Contact a Samsung Service Center to resolve the issue.
The display looks unstable and then freezes.	The screen may freeze when a resolution other than the recommended resolution is used or if the signal is not stable. To resolve the issue, change the PC resolution to the recommended resolution.
The screen cannot be displayed in full screen.	A scaled SD (4:3) content file can cause black bars on both sides of an HD channel screen.
	A video with an aspect ratio different from the product can cause black bars at the top and bottom of the screen.
	Change the screen size setting to full screen on the product or source device.

Sound issue

There is no sound.	Check the connection of the audio cable or adjust the volume.
	Check the volume.
The volume is too low.	Adjust the volume.
	If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software program.
Video is available but there is no sound.	If an HDMI cable is connected, check the audio output settings on the PC.
	Go to **Sound** and change **Speaker Select** to **Internal**.
	If a source device is used • Make sure the audio cable is properly connected to the audio input port on the product. • Check the audio output settings for the source device. (For example, if an HDMI cable is connected to the monitor, the audio setting for the cable box may need to be changed to HDMI.)
	If a DVI-HDMI cable is used, a separate audio cable is required.
	If the product has a headphone port, make sure nothing is connected to it.
	Reconnect the power cable to the device and then reboot the device.
There is static coming from the speakers.	Check the cable connection. Make sure a video cable is not connected to an audio input port.
	Check the signal strength after connecting a cable.
	Low signal level can cause corrupted sound.

Sound issue

There is audible sound when the volume is muted.	When **Speaker Select** is set to **External**, the volume button and mute function are disabled. Adjust the volume for the external speakers.
	Audio settings for main speakers are separate from the internal speakers on the product. Changing or muting the volume on the product does not affect an external amplifier(decoder).
Sound from the monitor does not change after Sound Mode is changed.	Audio settings for main speakers are separate from the internal speakers on the product. Audio settings on a source device do not affect the internal speaker settings on the product.
There is an echo sound coming from the speakers.	Different decoding speeds between the product speakers and external speakers can cause an echo. In this case, set **Speaker Select** to **External**.

Remote control issue

The remote control does not work.	Make sure that the batteries are correctly in place (+/-).
	Check if the batteries are flat.
	Check for power failure.
	Make sure that the power cord is connected.
	Check for any special lighting or neon signs switched on in the vicinity.

Source device issue

A beeping sound is heard when my PC is booting.	If a beeping sound is heard when your PC is booting, have your PC serviced.

Other issue

Small particles are found on the edges of the product.	The particles are part of the product design. The product is not defective.
The PIP menu is not available.	The menu is enabled or disabled depending on the **Source** mode. — Refer to page 53 for details about the **PIP** menu.
When I try to change the PC resolution, a message "The defined resolution is not currently supported." appears.	The message "**The defined resolution is not currently supported.**" appears if the input source resolution exceeds the maximum resolution of the display. To resolve the issue, change the PC resolution to a resolution supported on the display.
There is no sound from the speakers in HDMI mode when a DVI-HDMI cable is connected.	DVI cables do not transmit sound data. Make sure to connect the audio cable to the correct input jack to enable audio.
HDMI Black Level is not functioning properly on an HDMI device with YCbCr output.	This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.
There is no sound in HDMI mode.	Displayed picture colors may not look normal. Video or sound may not be available. This can occur if a source device that only supports an older version of the HDMI standard is connected to the product. If these issues occur, connect an audio cable along with the HDMI cable.
	Some PC graphics cards may not automatically recognize HDMI signals that do not include sound. In this case, manually select a sound input.

	Sound input	Screen mode
PC	Auto	PC settings
DVI PC	Audio In(Stereo ports)	PC settings

Other issue

The IR sensor is not functioning.	Make sure the sensor light turns on when a button is pressed on the remote control.
	• If the sensor light does not turn on, turn the power switch off and then on again on the back of the product. (The power LED lights up red when the screen is switched off.) If the sensor light still does not turn on after the power switch is turned off and then on again, an internal jack may be disconnected. Contact your nearest service center to have the product serviced.
	• If the sensor light that is on does not flash red when a button is pressed on the remote control, the IR sensor may be defective. Contact your nearest service center to have the product serviced.
	• If there is no change on the screen when a button is pressed on the remote control although the sensor light flashes red, the mainboard may be defective. Contact your nearest service center to have the product serviced.

Q & A

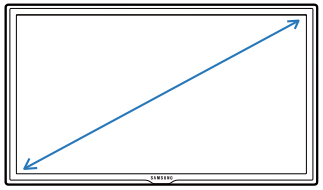
Refer to the user manual for your PC or graphics card for further instructions on adjustment.

Question	Answer
How can I change the frequency?	Set the frequency on your graphics card. • Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
How can I change the resolution?	• Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** and adjust the resolution. • Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** and adjust the resolution. • Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** and adjust the resolution. • Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution. • Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.

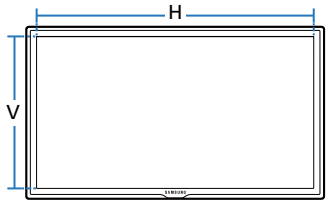
Question	Answer
How do I set powersaving mode?	• Windows XP: Set power-saving mode in **Control Panel → Appearance and Themes → Display → Screen Saver Settings** or BIOS SETUP on the PC. • Windows ME/2000: Set power-saving mode in **Control Panel → Display → Screen Saver Settings** or BIOS SETUP on the PC. • Windows Vista: Set power-saving mode in **Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC. • Windows 7: Set power-saving mode in **Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC. • Windows 8: Set power-saving mode in **Settings → Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC.

Chapter 11
Specifications

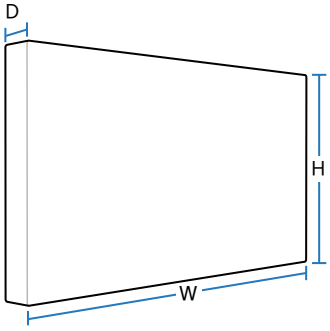
1 Size



2 Display area



3 Dimensions (W x H x D)



General

Model Name		ED65D	ED75D
Panel	**Size**	65 Class (64.5 inches / 163 cm)	75 Class (75 inches / 189 cm)
	Display area	1431.4 (H) x 806.5 (V) mm 56.4 (H) x 31.8 (V) inches	1653.3 (H) x 931.3 (V) mm 65.1 (H) x 36.7 (V) inches
Dimensions (W x H x D)		1467.5 x 848.0 x 65.0 mm 57.8 x 33.4 x 2.6 inches	1675.0 x 958.5 x 65.0 mm 65.9 x 37.7 x 2.6 inches
Weight (without stand)		26.8 kg / 59.1 lbs	28.8 kg / 63.5 lbs
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.	
Environmental considerations	**Operating**	Temperature : 32 °F ~ 104 °F (0 °C ~ 40 °C) Humidity : 10 % ~ 80 %, non-condensing	
	Storage	Temperature : -4 °F ~ 113 °F (-20 °C ~ 45 °C) Humidity : 5 % ~ 95 %, non-condensing	

— Plug-and-Play

This monitor can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the monitor and PC system optimizes the monitor settings.

Monitor installation takes place automatically. However, you can customize the installation settings if desired.

— Panel Dots (Pixels)

Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may appear brighter or darker on the panel. This does not affect product performance.

— This device is a Class A digital apparatus.

(USA only)

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:

www.samsung.com/recyclingdirect or call, (877) 278 - 0799

PowerSaver

The power-saving function of this product reduces power consumption by switching off the screen and changing the color of the power LED if the product is not used for a specified period of time. The power is not turned off in power-saving mode. To switch the screen back on, press any key on the keyboard or move the mouse. Power-savign mode only functions when the product is connected to a PC with a power-saving function.

PowerSaver		Normal Operation			Power saving mode (SOG Signal : Not Support the DPM Mode)	Power off	Power off (Power Button off)
		Rating	Typical	Max			
Power Indicator		Off			Blinking	On	Off
Power Consumption	ED65D	215 Watts	180 Watts	235 Watts	1 Watts	1 Watts	0 Watts
	ED75D	280 Watts	247 Watts	310 Watts	1 Watts	1 Watts	0 Watts

— The displayed power consumption level can vary in different operating conditions or when settings are changed.

— SOG(Sync On Green) is not supported.

— To reduce the power consumption to 0, turn off the switch at the back or disconnect the power cord. Disconnect the power cable if you will not be using the product for an extended period of time (during vacation, etc.).

Preset Timing Modes

This product can be set to only one resolution for each screen size to obtain the optimum picture quality due to the nature of the panel. Using a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for your product.
Check the frequency when you exchange a CDT product (connected to a PC) for an LCD product. If the LCD product does not support 85Hz, change the vertical frequency to 60Hz using the CDT product before you exchange it with the LCD product.

Synchronization	**Horizontal Frequency**	30 ~ 81 kHz
	Vertical Frequency	48 ~ 75 Hz
Resolution	**Optimum resolution**	1920 x 1080 @ 60 Hz
	Maximum resolution	1920 x 1080 @ 60 Hz

The screen will automatically be adjusted if a signal that belongs to the following standard signal modes is transmitted from your PC. If the signal transmitted from the PC does not belong to the standard signal modes, the screen may be blank with the power LED on. In such a case, change the settings according to the following table by referring to the graphics card user manual.

- Horizontal Frequency
  The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.
- Vertical Frequency
  The product displays a single image multiple times per second (like a fluorescent light) to display what the viewer sees. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1366 x 768	47.712	59.790	85.500	+/+
VESA,1440 x 900	55.935	59.887	106.500	-/+
VESA,1600 x 900	60.000	60.000	108.000	+/+
VESA,1680 x 1050	65.290	59.954	146.250	-/+
VESA,1920 x 1080	67.500	60.000	148.500	+/+

Chapter 12
Appendix

Contact SAMSUNG WORLD WIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

NORTH AMERICA

U.S.A	1-800-SAMSUNG (726-7864)	http://www.samsung.com/us
CANADA	1-800-SAMSUNG (726-7864)	http://www.samsung.com/ca (English) http://www.samsung.com/ca_fr (French)

LATIN AMERICA

ARGENTINE	0800 333 3733	http://www.samsung.com.ar
BOLIVIA	800-10-7260	http://www.samsung.com
BRAZIL	0800-124-421 (Demais cidades e regiões) 4004-0000 (Capitais e grandes centros)	http://www.samsung.com.br
CHILE	800-SAMSUNG (726-7864)	http://www.samsung.com/cl
COLOMBIA	01 8000 112 112 Bogotá 600 12 72	http://www.samsung.com/co

LATIN AMERICA

COSTA RICA	0-800-507-7267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
DOMINICA	1-800-751-2676	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
ECUADOR	1-800-10-7267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
EL SALVADOR	800-6225	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
GUATEMALA	1-800-299-0013	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
HONDURAS	800-27919267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
JAMAICA	1-800-234-7267	http://www.samsung.com
NICARAGUA	001-800-5077267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
MEXICO	01-800-SAMSUNG (726-7864)	http://www.samsung.com
PANAMA	800-7267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
PARAGUAY	009 800 542 0001	http://www.samsung.com.py
PERU	0-800-777-08	http://www.samsung.com/pe
PUERTO RICO	1-800-682-3180	http://www.samsung.com

LATIN AMERICA

TRINIDAD & TOBAGO	1-800-SAMSUNG (726-7864)	http://www.samsung.com
URUGUAY	000 405 437 33	http://www.samsung.com
VENEZUELA	0-800-100-5303	http://www.samsung.com/ve

EUROPE

AUSTRIA	0810 - SAMSUNG (7267864, € 0.07/min)	http://www.samsung.com
BELGIUM	02-201-24-18	http://www.samsung.com/be (Dutch) http://www.samsung.com/be_fr (French)
BOSNIA	051 331 999	http://www.samsung.com
BULGARIA	07001 33 11 , share cost tariff	http://www.samsung.com/bg
CROATIA	062 SAMSUNG (062 726 786)	http://www.samsung.com/hr
CYPRUS	8009 4000 only from landline	http://www.samsung.com/gr
CZECH	800 - SAMSUNG (800-726786)	http://www.samsung.com
	Samsung Electronics Czech and Slovak, s.r.o. V Parku 2343/24, 148 00 - Praha 4	
DENMARK	70 70 19 70	http://www.samsung.com
EIRE	0818 717100	http://www.samsung.com
ESTONIA	800-7267	http://www.samsung.com/ee
FINLAND	030-6227 515	http://www.samsung.com
FRANCE	01 48 63 00 00	http://www.samsung.com/fr

EUROPE

GERMANY	0180 6 SAMSUNG bzw.	http://www.samsung.com
	0180 6 7267864* (*0,20 €/Anruf aus dem dt. Festnetz, aus dem Mobilfunk max. 0,60 €/Anruf)	
GREECE	80111-SAMSUNG (80111 726 7864) only from land line (+30) 210 6897691 from mobile and land line	http://www.samsung.com/gr
HUNGARY	06-80-SAMSUNG (726-7864)	http://www.samsung.com/hu
ITALIA	800-SAMSUNG (726-7864)	http://www.samsung.com
LATVIA	8000-7267	http://www.samsung.com/lv
LITHUANIA	8-800-77777	http://www.samsung.com/lt
LUXEMBURG	261 03 710	http://www.samsung.com
MONTENEGRO	020 405 888	http://www.samsung.com
NETHERLANDS	0900-SAMSUNG (0900-7267864) (€ 0,10/Min)	http://www.samsung.com
NORWAY	815 56480	http://www.samsung.com
POLAND	0 801-172-678* lub +48 22 607-93-33 ** *(całkowity koszt połączenia jak za 1 impuls według taryfy operatora) ** (koszt połączenia według taryfy operatora)	http://www.samsung.com/pl
PORTUGAL	808 20-SAMSUNG (808 20 7267)	http://www.samsung.com
ROMANIA	08008 SAMSUNG (08008 726 7864) TOLL FREE No.	http://www.samsung.com/ro
SERBIA	011 321 6899	http://www.samsung.com/rs

EUROPE

SLOVAKIA	0800 - SAMSUNG (0800-726 786)	http://www.samsung.com
SPAIN	902172678	http://www.samsung.com
SWEDEN	0771 726 7864 (SAMSUNG)	http://www.samsung.com
SWITZERLAND	0848 - SAMSUNG (7267864, CHF 0.08/min)	http://www.samsung.com/ch (German) http://www.samsung.com/ch_fr (French)
U.K	0330 SAMSUNG (7267864)	http://www.samsung.com

CIS

ARMENIA	0-800-05-555	http://www.samsung.com
AZERBAIJAN	088-55-55-555	http://www.samsung.com
BELARUS	810-800-500-55-500	http://www.samsung.com
GEORGIA	0-800-555-555	http://www.samsung.com
KAZAKHSTAN	8-10-800-500-55-500 (GSM: 7799)	http://www.samsung.com
KYRGYZSTAN	00-800-500-55-500	http://www.samsung.com
MOLDOVA	0-800-614-40	http://www.samsung.com
MONGOLIA	+7-800-555-55-55	http://www.samsung.com
RUSSIA	8-800-555-55-55	http://www.samsung.com
TADJIKISTAN	8-10-800-500-55-500	http://www.samsung.com
UKRAINE	0-800-502-000	http://www.samsung.com/ua (Ukrainian) http://www.samsung.com/ua_ru (Russian)

CIS

UZBEKISTAN	8-10-800-500-55-500	http://www.samsung.com

ASIA PACIFIC

AUSTRALIA	1300 362 603	http://www.samsung.com/au
CHINA	400-810-5858	http://www.samsung.com
HONG KONG	(852) 3698 4698	http://www.samsung.com/hk (Chinese) http://www.samsung.com/hk_en (English)
INDIA	1800 3000 8282 1800 266 8282	http://www.samsung.com/in
INDONESIA	0800-112-8888 (Toll Free) (021) 56997777	http://www.samsung.com/id
JAPAN	0120-327-527	http://www.samsung.com
MALAYSIA	1800-88-9999	http://www.samsung.com/my
NEW ZEALAND	0800 SAMSUNG (0800 726 786)	http://www.samsung.com/nz
PHILIPPINES	1-800-10-7267864 [PLDT] 1-800-8-7267864 [Globe landline and Mobile] 02-4222111 [Other landline]	http://www.samsung.com/ph
SINGAPORE	1800-SAMSUNG (726-7864)	http://www.samsung.com/sg
TAIWAN	0800-32-9999	http://www.samsung.com/tw
THAILAND	0-2689-3232, 1800-29-3232	http://www.samsung.com/th

ASIA PACIFIC

VIETNAM	1800 588 889	http://www.samsung.com

MENA

ALGERIA	0800 100 100	http://www.samsung.com/n_africa
BAHRAIN	8000-4726	http://www.samsung.com/ae (English) http://www.samsung.com/ae_ar (Arabic)
EGYPT	08000-726786	http://www.samsung.com
IRAN	021-8255	http://www.samsung.com
JORDAN	0800-22273 06 5777444	http://www.samsung.com/Levant (English)
KUWAIT	183-2255 (183-CALL)	http://www.samsung.com/ae (English) http://www.samsung.com/ae_ar (Arabic)
MOROCCO	080 100 2255	http://www.samsung.com
OMAN	800-SAMSUNG (726-7864)	http://www.samsung.com/ae (English) http://www.samsung.com/ae_ar (Arabic)
PAKISTAN	0800-Samsung (72678)	http://www.samsung.com/pk/
QATAR	800-2255 (800-CALL)	http://www.samsung.com/ae (English) http://www.samsung.com/ae_ar (Arabic)
SAUDI ARABIA	920021230	http://www.samsung.com/sa
SYRIA	18252273	http://www.samsung.com/Levant (English)

MENA

TUNISIA	80-1000-12	http://www.samsung.com/n_africa
TURKEY	444 77 11	http://www.samsung.com
U.A.E	800-SAMSUNG (726-7864)	http://www.samsung.com

AFRICA

BOTSWANA	8007260000	http://www.samsung.com
BURUNDI	200	http://www.samsung.com
CAMEROON	7095-0077	http://www.samsung.com
COTE D' IVOIRE	8000 0077	http://www.samsung.com
DRC	499999	http://www.samsung.com
GHANA	0800-10077 0302-200077	http://www.samsung.com
KENYA	0800 545 545	http://www.samsung.com
NAMIBIA	08 197 267 864	http://www.samsung.com
NIGERIA	0800-726-7864	http://www.samsung.com
MOZAMBIQUE	847267864 / 827267864	http://www.samsung.com
RWANDA	9999	http://www.samsung.com
SENEGAL	800-00-0077	http://www.samsung.com
SOUTH AFRICA	0860 SAMSUNG (726 7864)	http://www.samsung.com

AFRICA

SUDAN	1969	http://www.samsung.com
TANZANIA	0685 88 99 00	http://www.samsung.com
UGANDA	0800 300 300	http://www.samsung.com
ZAMBIA	0211 350370	http://www.samsung.com

Responsibility for the Pay Service (Cost to Customers)

— When the service is requested, in spite of in warranty, we may charge you for a visit from a service technician in the following cases.

Not a product defect

Cleaning of the product, Adjustment, Explanation, Re-installation and etc.

- If a service technician gives instructions on how to use product or simply adjusts options without disassembling product.
- If a defect is caused by external environmental factors (Internet, Antenna, Wired Signal, etc.)
- If a product is reinstalled or devices are connected additionally after installing the purchased product for the first time.
- If a product is reinstalled to move to a different spot or to move to a different house.
- If customer requests instructions on how to use because of another company's product.
- If customer requests instructions on how to use the network or another company's program.
- If customer requests software installation and setup for the product.
- If a service technician removes/cleans dusts or foreign materials inside of the product.
- If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault

Product damage caused by customer's mishandling or wrong repair

If a product damage is caused by;

- External impact or drop.
- Use of supplies or separatly sold product unspecified by Samsung.
- Repair from a person besides an engineer of outsourcing service company or partner of Samsung Electronics Co., Ltd.
- Remodeling or repairing the product by customer.
- Using it with incorrect voltage or non-authorised electrical connections.
- Not following the "cautions" in User Manual.

Others

- If product fails by natural disaster. (lightning, fire, earthquake, flood damage, etc)
- If consumable components are all used up. (Battery, Toner, Fluorescent lights, Head, Vibrator, Lamp, Filter, Ribbon, etc.)

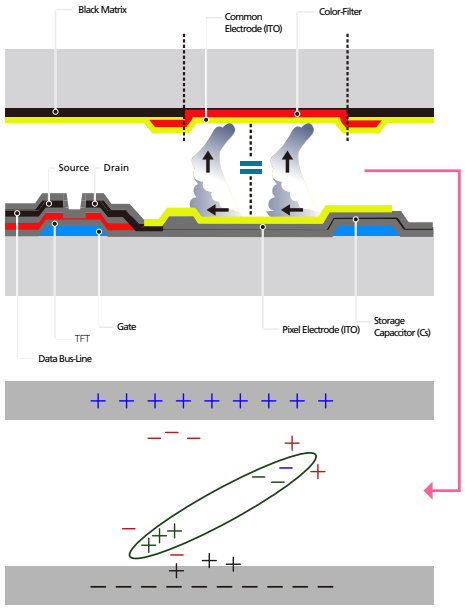
— If customer requests a service in case the product has no defect, service fee may be charged. So please read User Manual first.

Optimum Picture Quality and Afterimage Burn-in Prevention

Optimum Picture Quality

- Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may be brighter or darker on the panel. This does not affect product performance.
  - The number of sub-pixels by panel type: 6,220,800
- Run **Auto Adjustment** to improve the picture quality. If noise is still found even after auto adjustment, adjust **Coarse** or **Fine**.
- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
  - Activate power-saving mode or a dynamic screen saver if you will not be using the product for an extended period of time.

Prevention of Afterimage Burn-in



What is afterimage burn-in?

Afterimage burn-in should not occur when the LCD panel is operating normally. Normal operation refers to a continuously changing video pattern. If the LCD panel displays a fixed pattern for an extended period of time (more than 12 hours), a slight voltage difference may occur between the electrodes in pixels that control the liquid crystals.

Such a voltage difference between electrodes increases with time and makes the liquid crystals thinner. When this occurs, a previous image can remain on the screen when the pattern changes. To prevent this, the accumulated voltage difference should be reduced.

— Afterimage burn-in should not occur when an LCD panel is operating in proper conditions.

Preventing afterimage burn-in

— The best way to protect the product from afterimage burn-in is switching the power off or setting the PC or system to run a screen saver when not in use. Also, Warranty service may be limited depending on instruction guide.

- Powering Off, Screen Saver and Power Saving Mode
  - Power off the product for 2 hours after using it for 12 hours.
  - Go to Display Properties > Power Supply on your PC and set the product to power off as required.
  - Using a screen saver is recommended.
    It is best to use a single-color or moving-image screen saver.
- Regular color Change
  - Use 2 colors
    Switch between 2 colors every 30 minutes as shown above.

Type 1

FLIGHT	TIME
OZ348	20:30
UA102	21:10

Type 2

FLIGHT	TIME
OZ348	20:30
UA102	21:10

- Avoid combinations of a text color and background color of contrasting brightness.

— Avoid using grey as it may contribute to afterimage burn-in.

— Avoid using colors of contrasting brightness (black and white; grey).

- Regular Text color Change
  - Use bright colors of similar brightness.
    Interval: Change text color and background color every 30 minutes

  - Move and change text every 30 minutes as shown below.

  - Regularly display a moving image along with a logo.
    Interval: Display a moving image along with a logo for 60 seconds after using for 4 hours.

License

Manufactured under license from Dolby Laboratories.

Dolby and the double-D symbol are trademarks of Dolby Laboratories.

Manufactured under a license from U.S. Patent No's: 5,956,674, 5,974,380, 5,978,762, 6,487,535, 6,226,616, 7,212,872, 7,003,467, 7,272,567, 7,668,723, 7,392,195, 7,930,184, 7,333,929 and 7,548,853. DTS, the Symbol, and DTS and the Symbol together are registered trademarks & DTS Premium Sound | 5.1 is a trademark of DTS, Inc. ©2012 DTS, Inc. All Rights Reserved.

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

DivX Certified ® to play DivX ® video up to HD 1080p, including premium content.

DivX®, DivX Certified® and associated logos are trademarks of DivX, Inc. and are used under license.

ABOUT DIVX VIDEO: DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified® device that plays DivX video. Visit www.divx.com for more information and software tools to convert your files into DivX video.

ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to vod.divx.com for more information on how to complete your registration.

Covered by one or more of the following U.S. patents: 7,295,673; 7,460,668; 7,515,710; 7,519,274

Open Source Licence Notice

In the case of using open source software, Open Source Licences are available on the product menu. Open Source Licence Notice is written only English.

For information on the Open Source License Notice, contact the Samsung Customer Center or send email to oss.request@samsung.com.

Terminology

480i / 480p / 720p / 1080i / 1080p_____ Each of the scanning rates above refers to the number of effective scanning lines that decides the screen resolution. The scanning rate may be indicated in i (interlaced) or p (progressive), depending on the scanning method.

- Scanning

Scanning refers to a process of sending pixels that form an image progressively. A larger number of pixels will deliver a clearer and more vivid picture.

- Progressive

In progressive scan mode, all lines of pixels are scanned one by one (progressively) on the screen.

- Interlaced

In interlaced scan mode, every other line of pixels is scanned from top to bottom first and then the remaining lines of pixels (that were not scanned) are scanned.

Non-interlace Mode and Interlace Mode_____ Non-interlace mode (progressive scan) displays a horizontal line from the top to the bottom of a screen progressively. Interlace mode displays the odd number lines first and the even number lines next. Non-interlace mode is mainly used in monitors as it produces screen clarity and interlace mode is mainly used in TVs.

Dot Pitch_____ The product and screen consist of red, green and blue dots. A shorter distance between the dots produces a higher resolution. Dot pitch refers to the distance between the shortest distance between dots of the same color. Dot pitch is measured in millimeters.

Vertical Frequency_____ The product displays a single image many times per second (like a fluorescent light that flickers) to display an image for a viewer to see. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

E.g. 60Hz refers to a single image being displayed 60 times in one second.

Horizontal Frequency_____ The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

Source_____ Input source refers to a video source device connected to the product such as a camcorder or video or DVD player.

Component ports (green, blue and red)_____ The component ports, which identify, transmit and receive contrast signals, provide superior picture quality to any other video connection methods.

Plug & Play_____ Plug & Play is a function that allows the automatic exchange of information between a monitor and PC to produce an optimum display environment. The product uses VESA DDC (international standard) to execute Plug & Play.

Resolution_____ Resolution is the number of horizontal dots (pixels) and vertical dots (pixels) that form a screen. It represents the level of display detail. A higher resolution enables more data to be displayed on the screen and is useful to perform multiple tasks simultaneously.

E.g. A resolution of 1920 X 1080 consists of 1,920 horizontal pixels (horizontal resolution) and 1,080 vertical pixels (vertical resolution).

HDMI (High Definition Multimedia Interface)_____ It is an interface that can be connected to a digital audio source as well as a high-definition video source by using a single cable without compression.

Multiple Display Control (MDC)_____ MDC (Multiple Display Control) is an application that allows multiple display devices to be controlled simultaneously using a PC. Communication between a PC and monitor takes place using RS232C (serial data transmission) and RJ45 (LAN) cables.